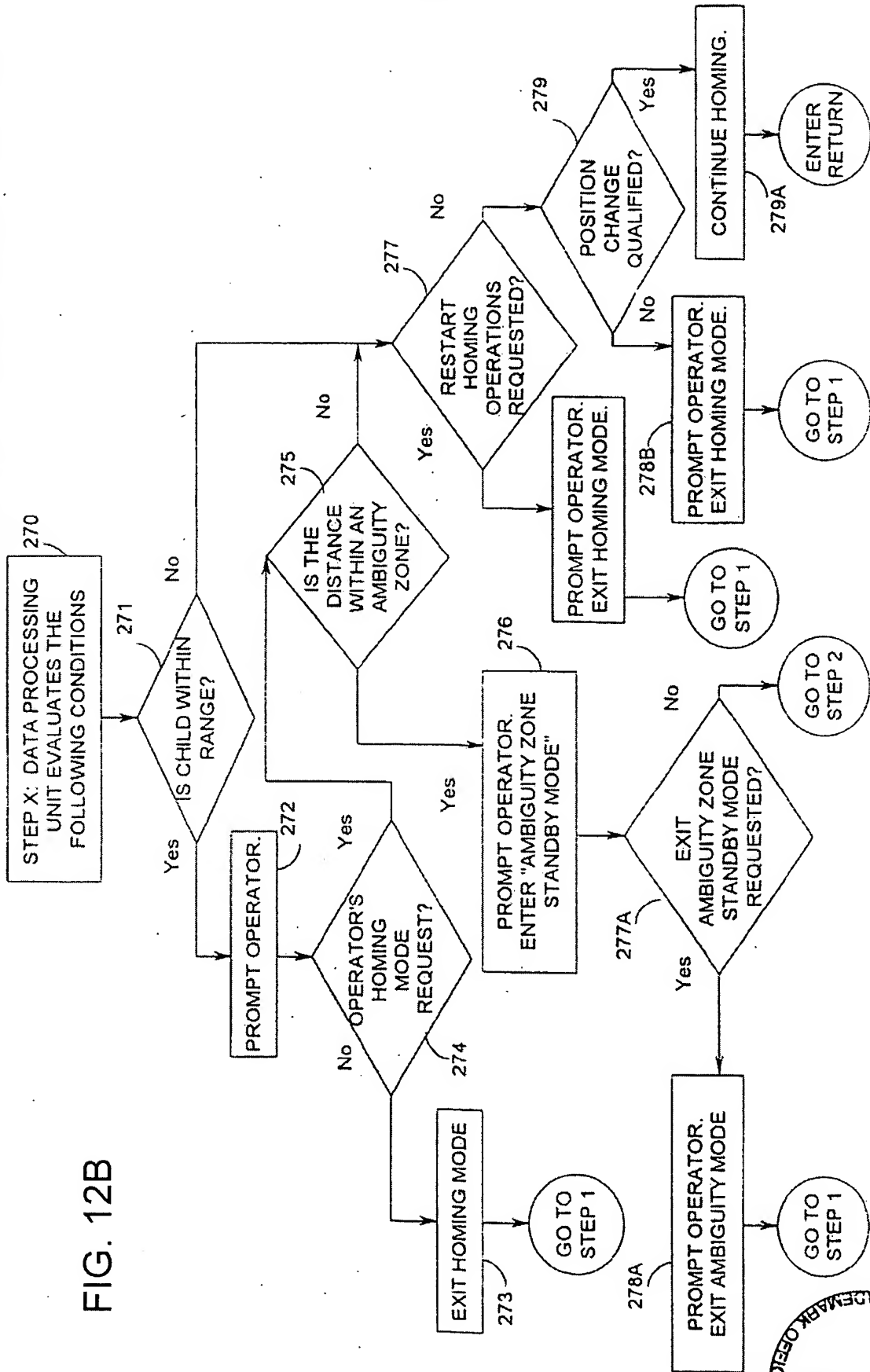


ALGORITHM 1 FLOW CHART, CONTINUED



Algorithm 2 flow chart

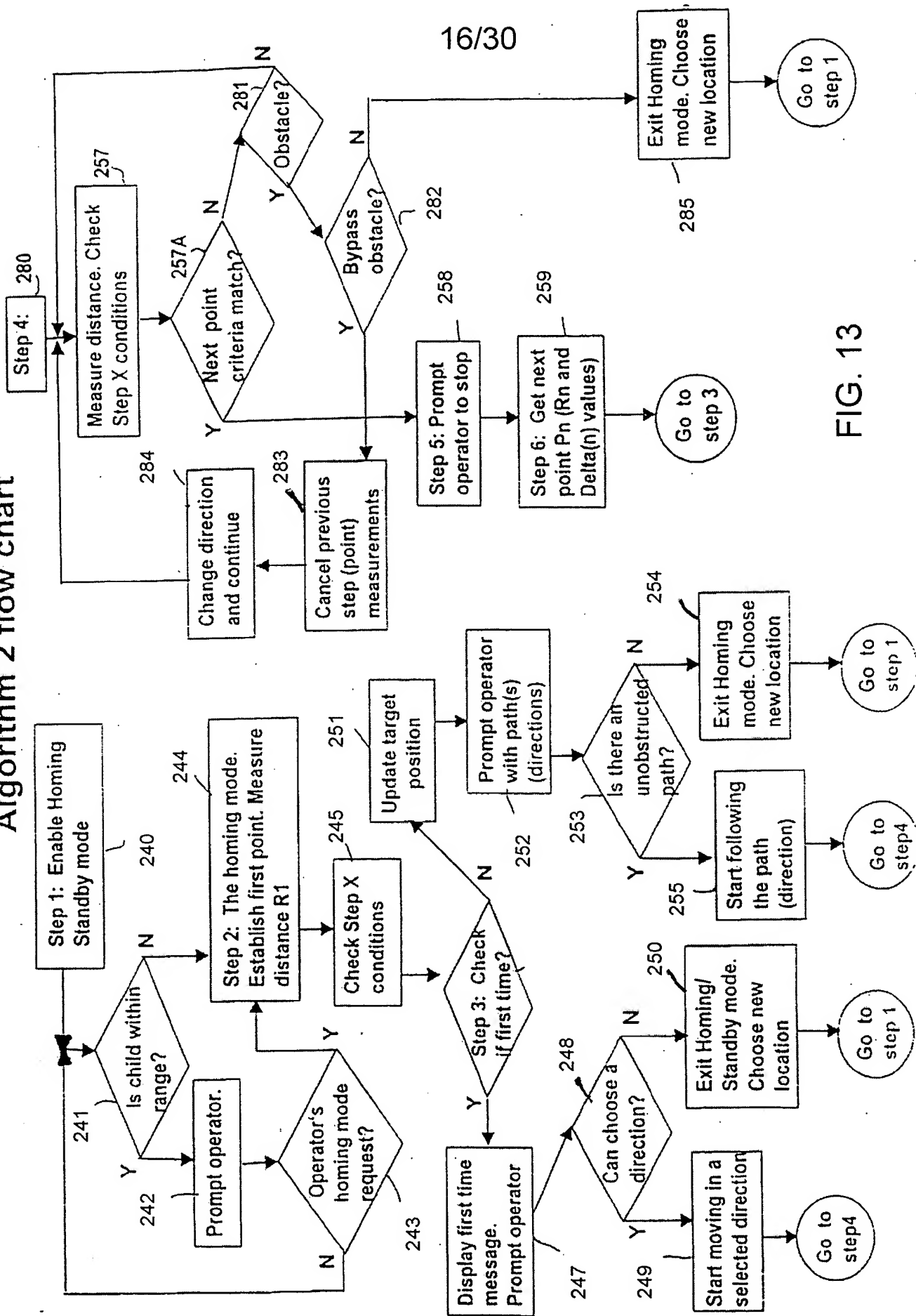


FIG. 13

Algorithm 3 flow chart

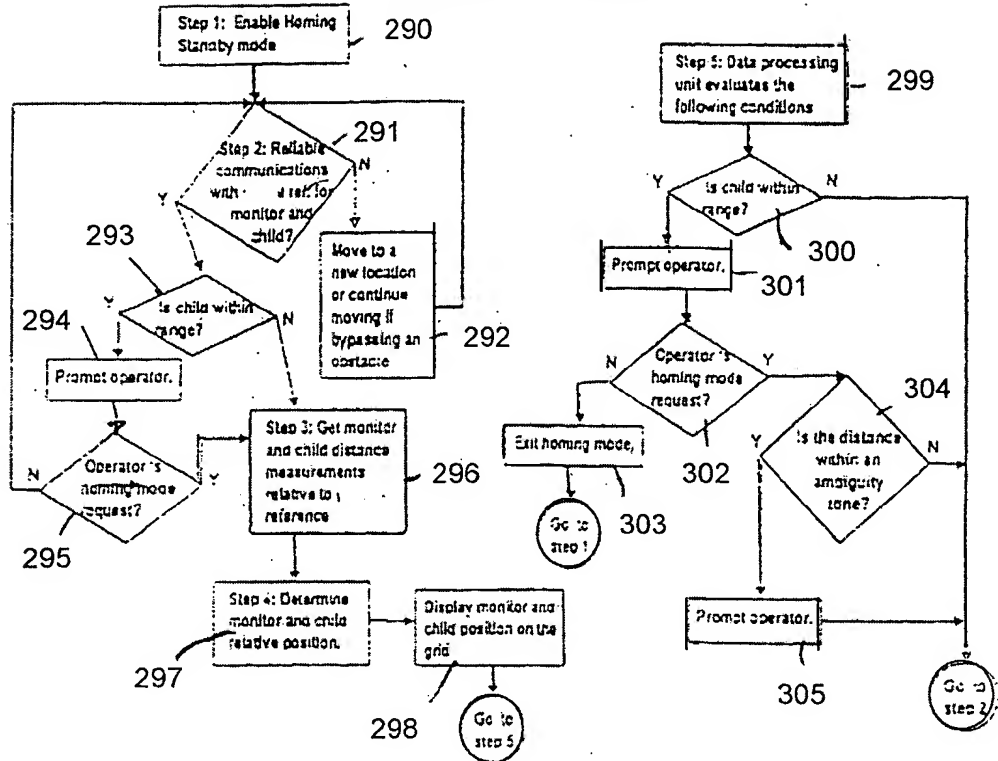


FIG. 14

Algorithm 1 homing

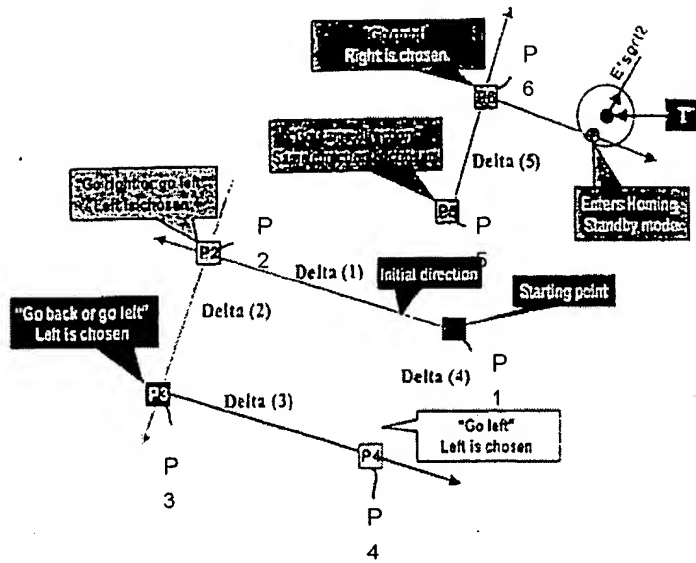
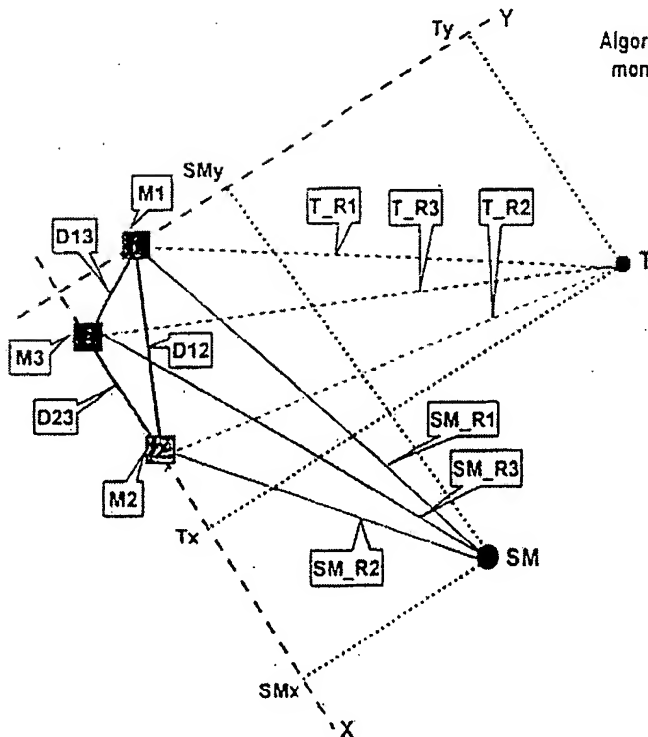


FIG. 15

Algorithm 3 homing. Three stationary monitors example - fixed reference



X, Y - virtual coordinates
 SM - "searching monitor"
 T - child target
 Ty, Tx - target virtual coordinates
 SMx, SMy - "Searching Monitor" virtual coordinates
 DXX - distance between reference monitors
 T_Rn - distance between reference monitors and Target
 SM_Rn - distance between reference monitors and the "searching monitor"

FIG. 16

Algorithm 3 homing. Three stationary monitors reference example, continued
(virtual coordinates are rotated for mapping into display grid)

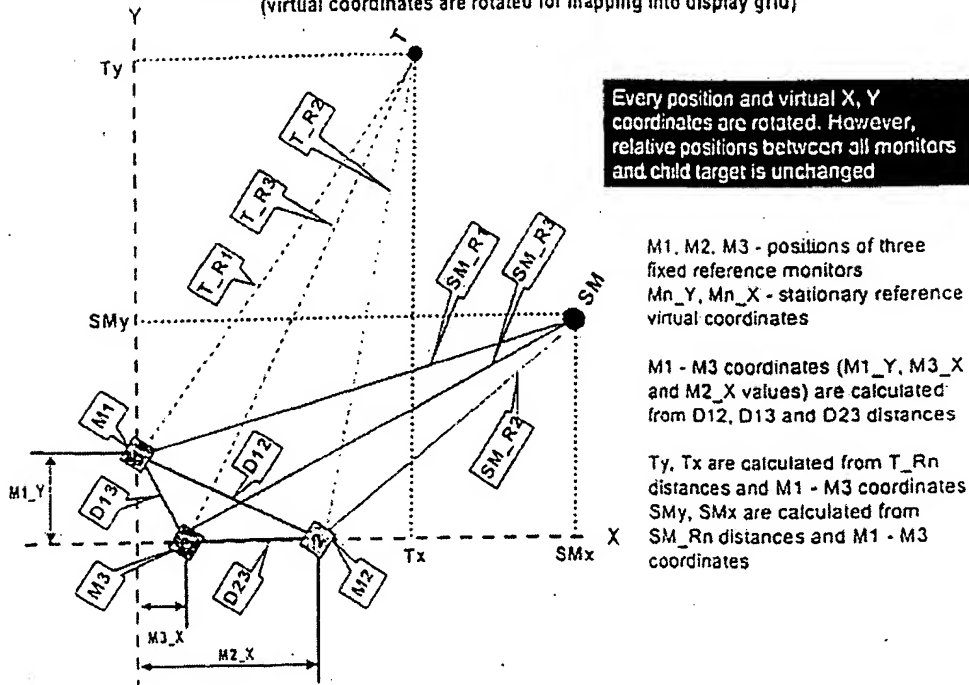


FIG. 17

Algorithm 3 homing. Three stationary monitors reference example, continued
(display grid)

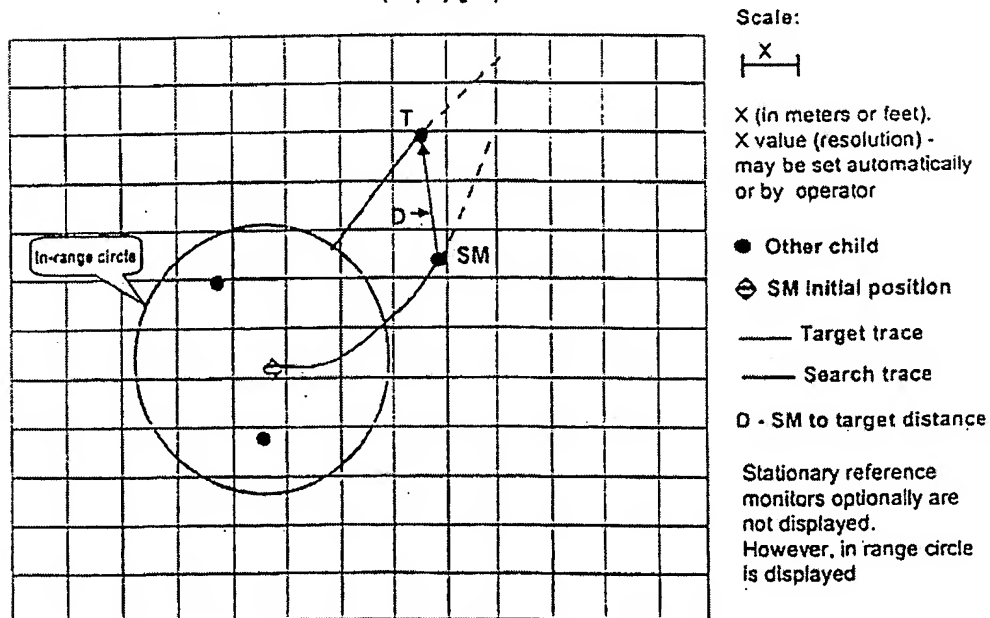


FIG. 18

Algorithm 3 homing. Three moving monitors reference example,
(display grid)

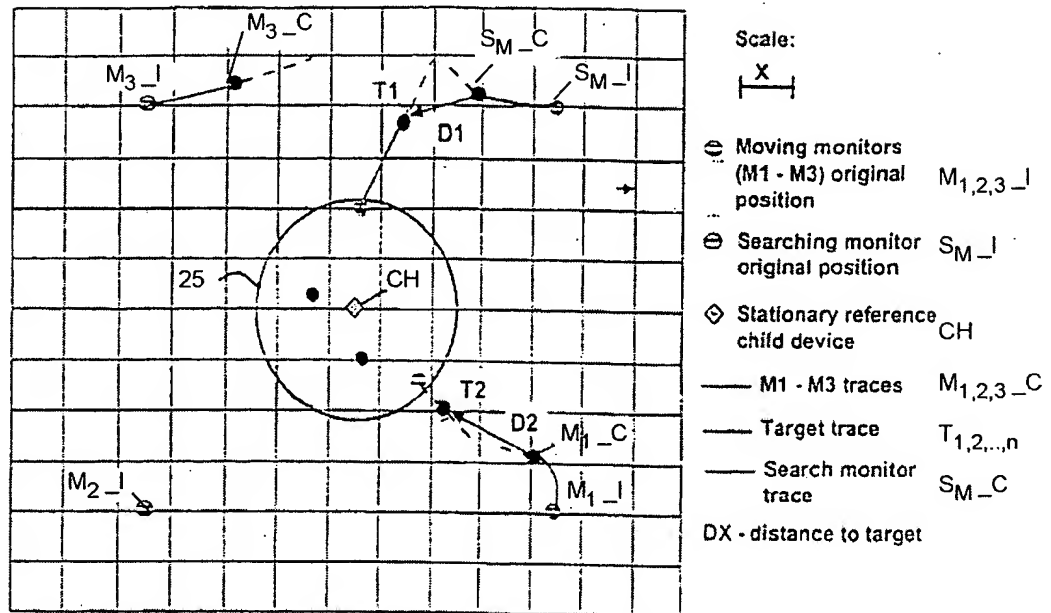
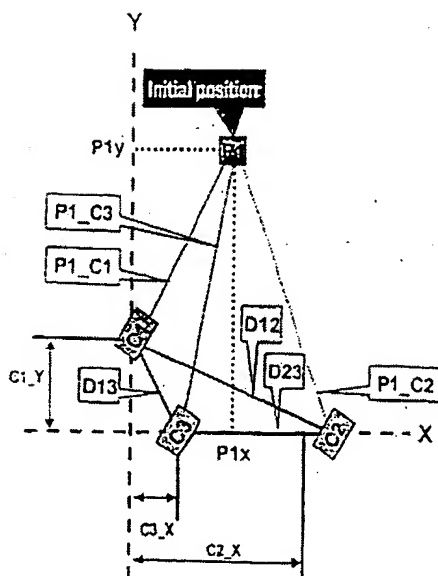


FIG. 19

Algorithm 2 homing. Three stationary child devices reference example
(virtual coordinates are rotated)



Every position and virtual X, Y coordinates are rotated. However, relative positions between all reference child devices searching monitor and target is unchanged

X, Y - virtual coordinates.
C1, C2, C3 - positions of three stationary child reference monitors

Ck_Y, Ck_X - fixed child reference virtual coordinates are calculated from D12, D13 and D23 values

Pny, Pnx are calculated from Pn_Ck distances and C1-C3 coordinates

FIG. 20

Algorithm 2 homing. Three stationary child devices reference example, continued

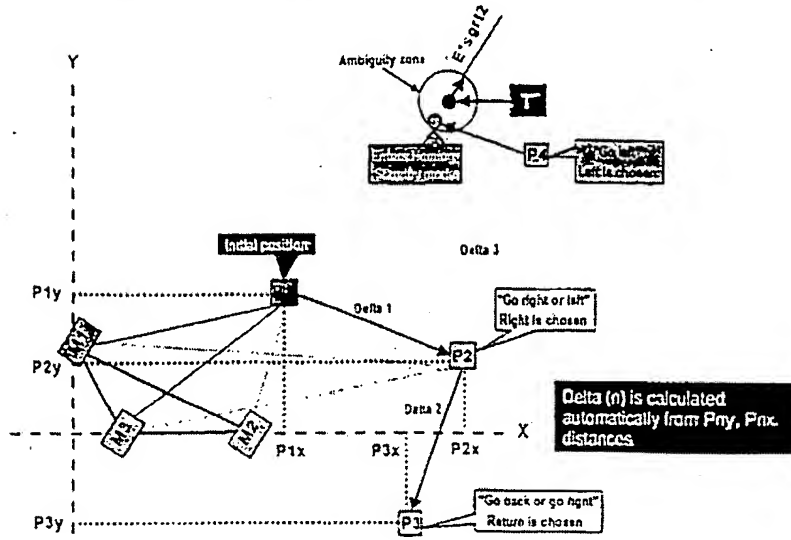


FIG. 21

Algorithm 2 homing. Three stationary child devices reference example, continued (obstacle avoidance/bypassing)

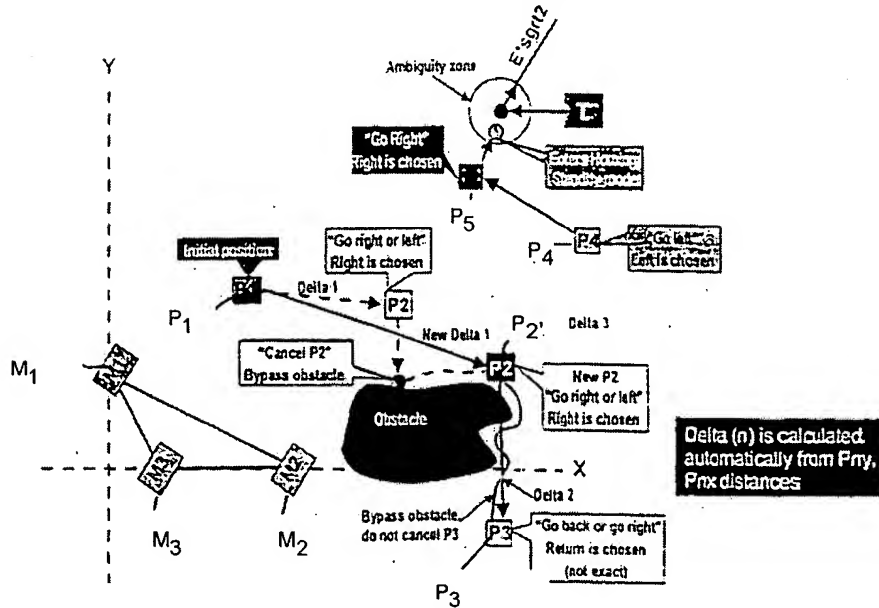


FIG. 22

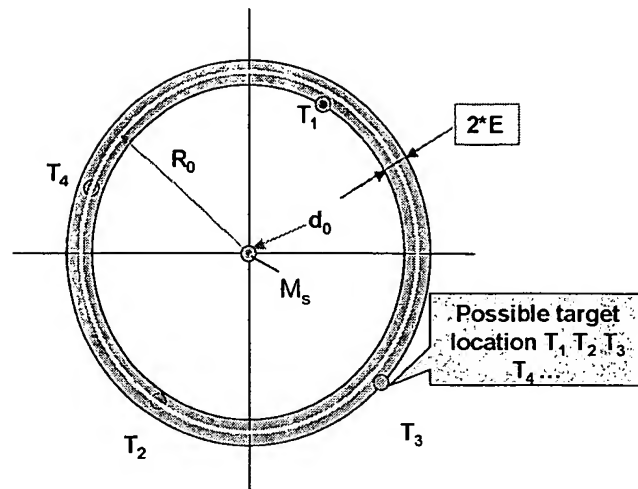


FIG. 23

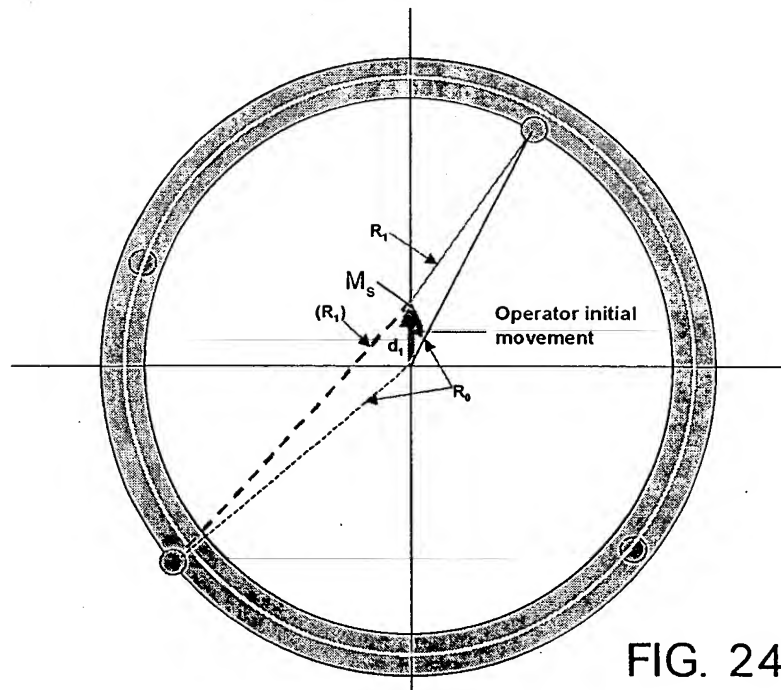


FIG. 24

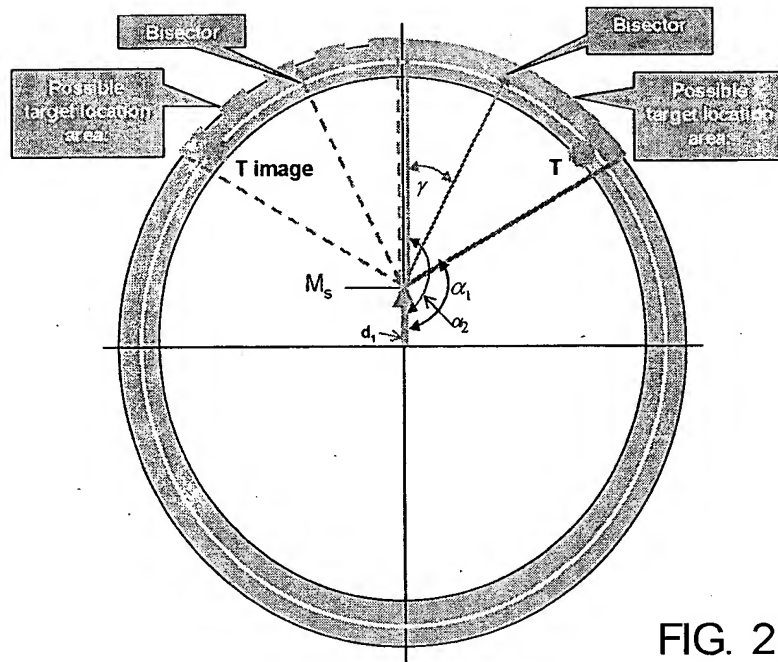


FIG. 25

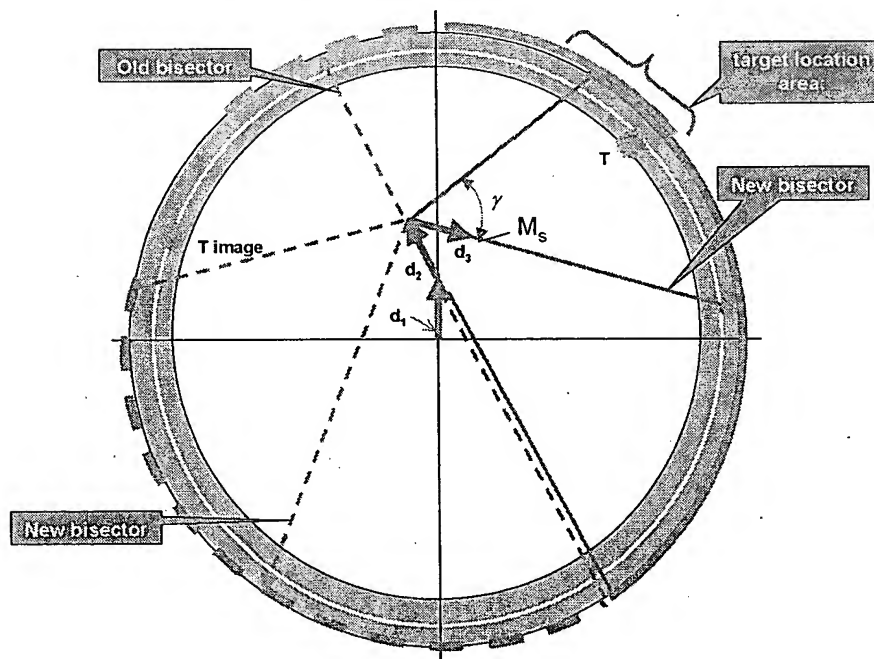
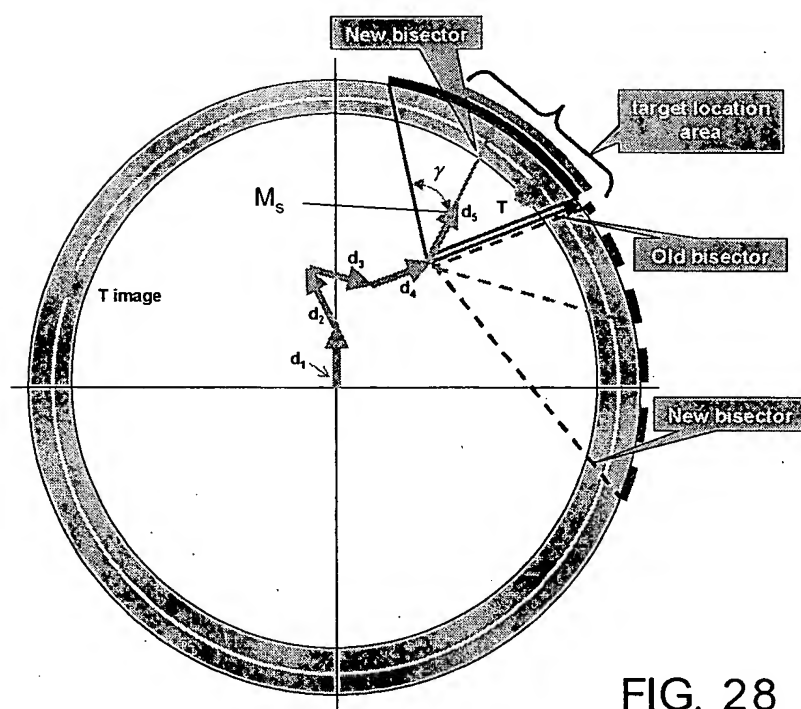
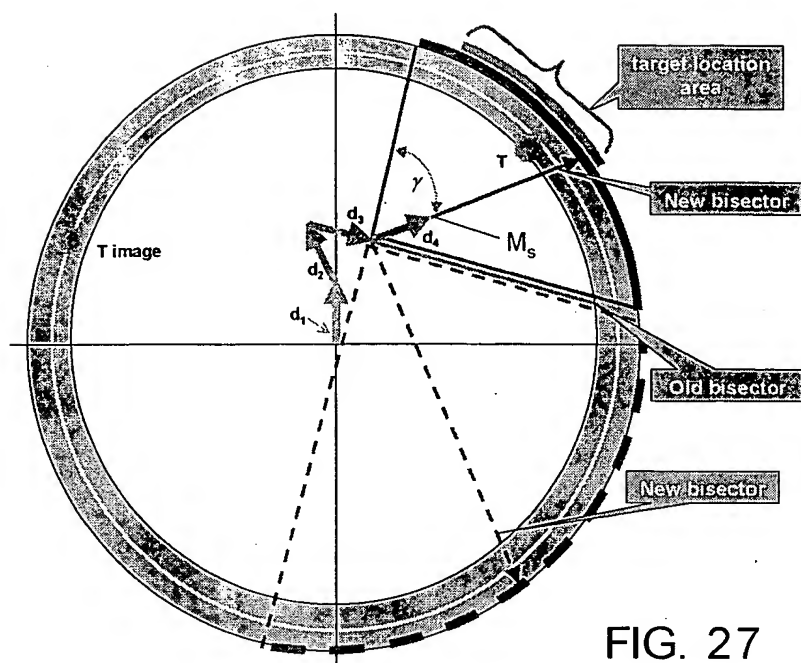


FIG. 26



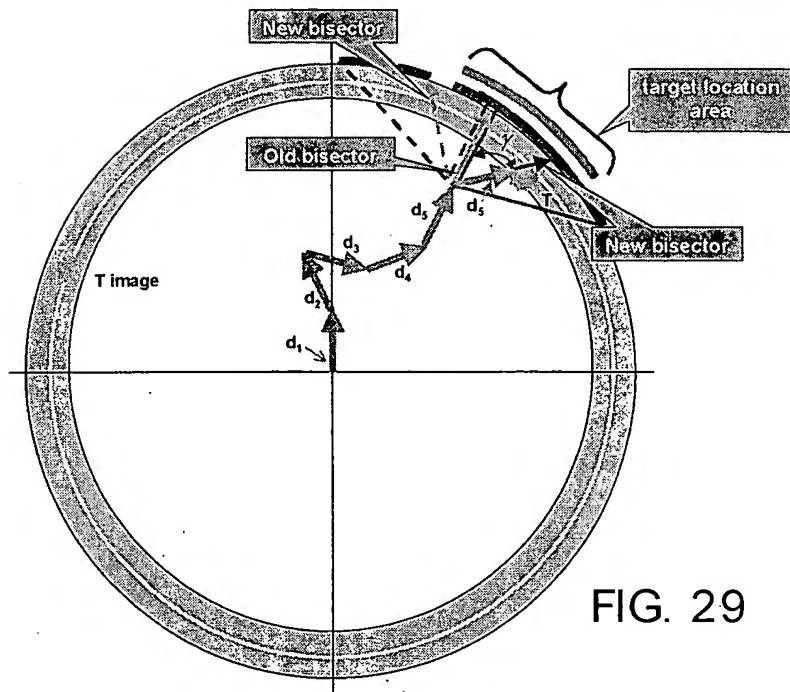


FIG. 29

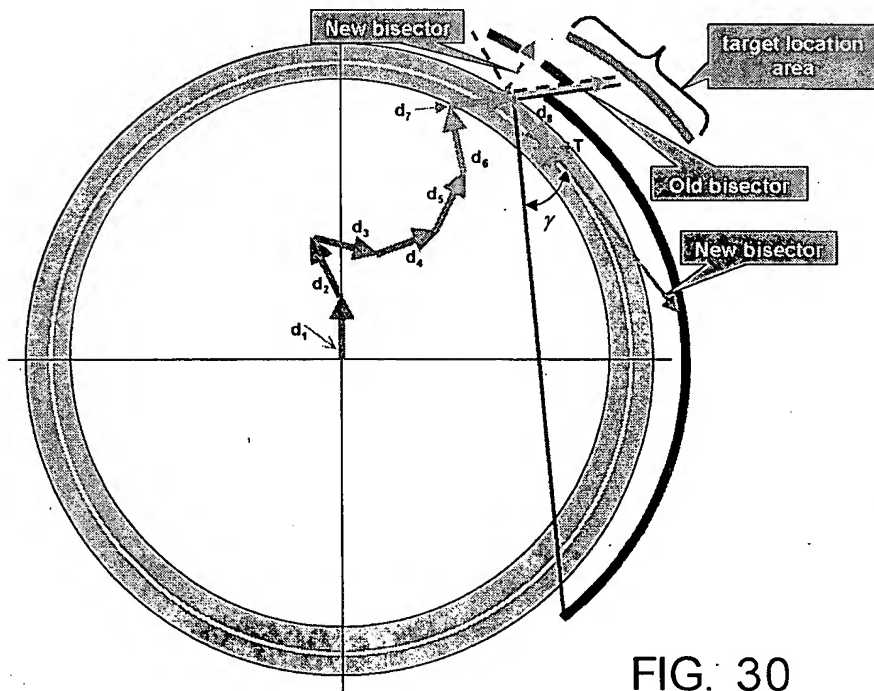


FIG. 30

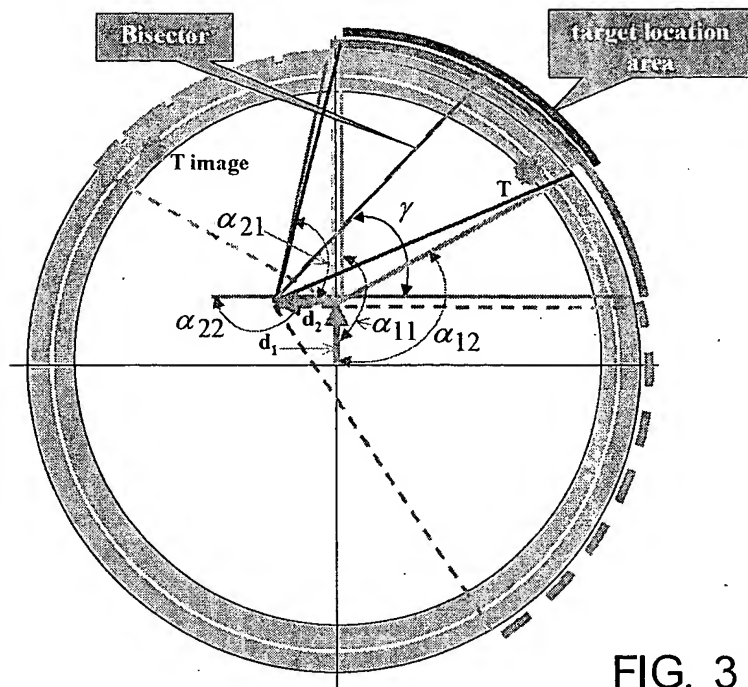


FIG. 31

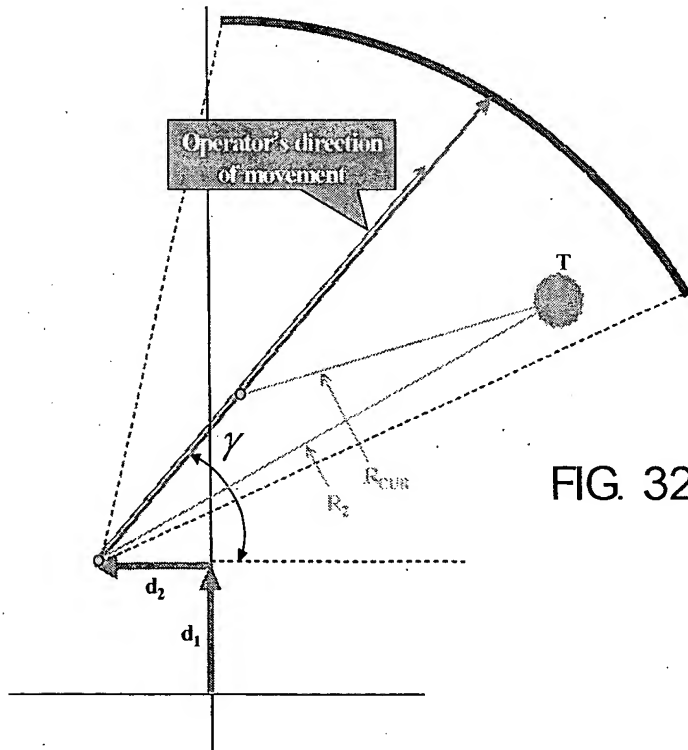


FIG. 32

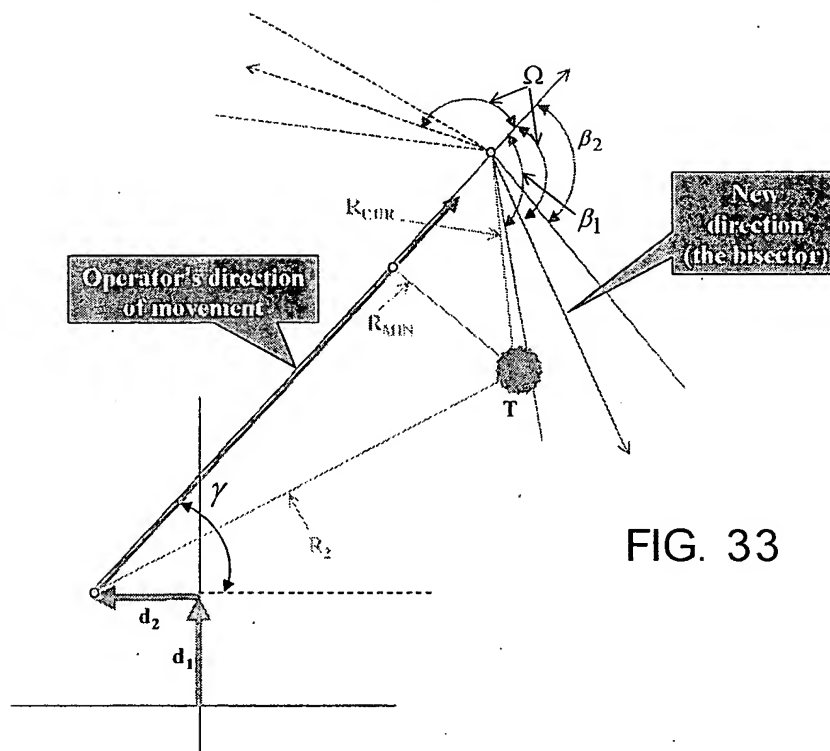


FIG. 33

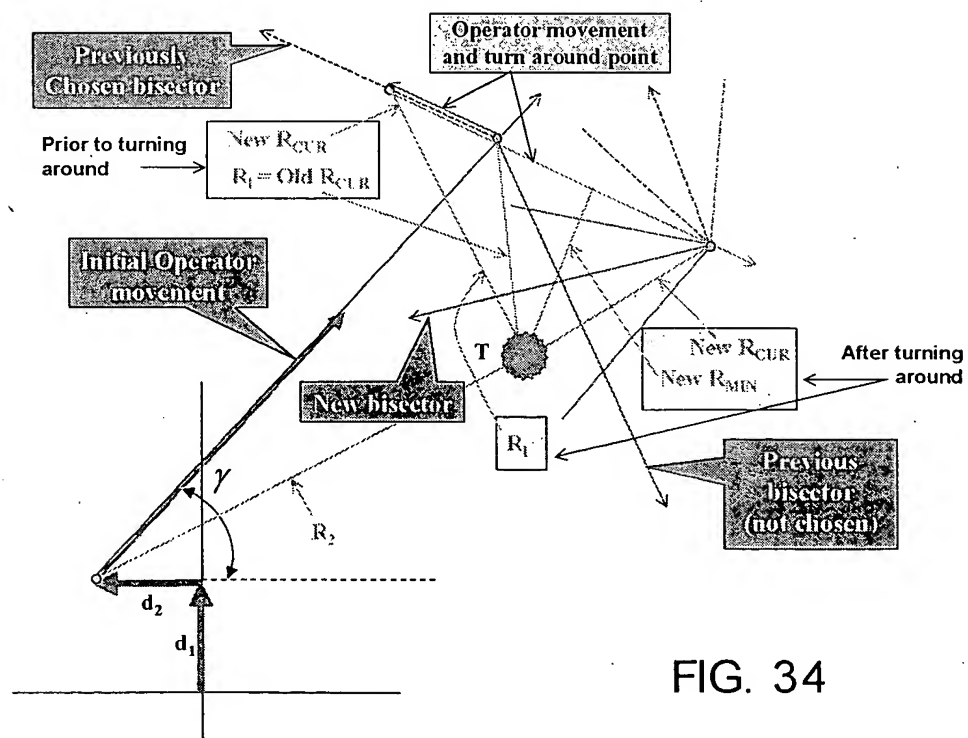


FIG. 34

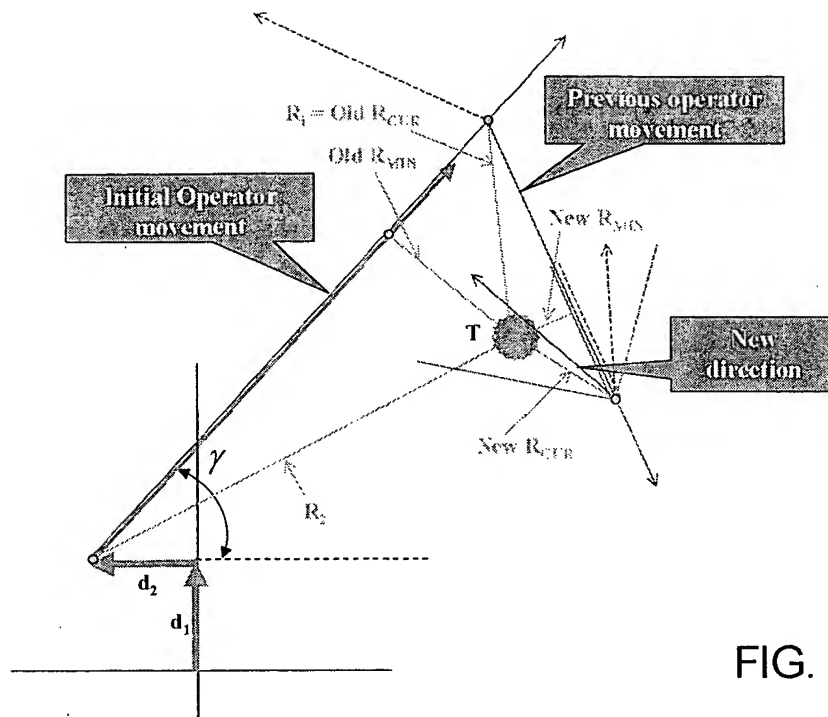


FIG. 35

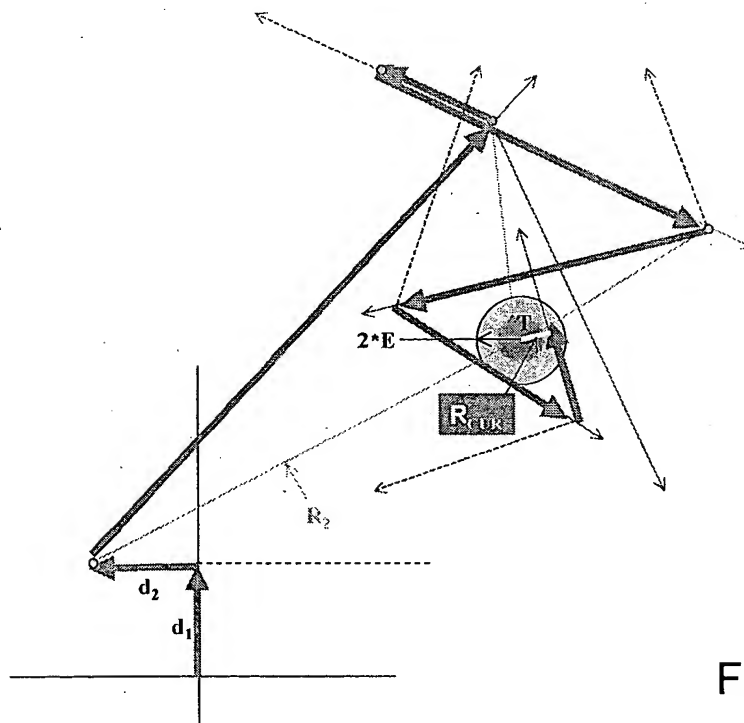


FIG. 36

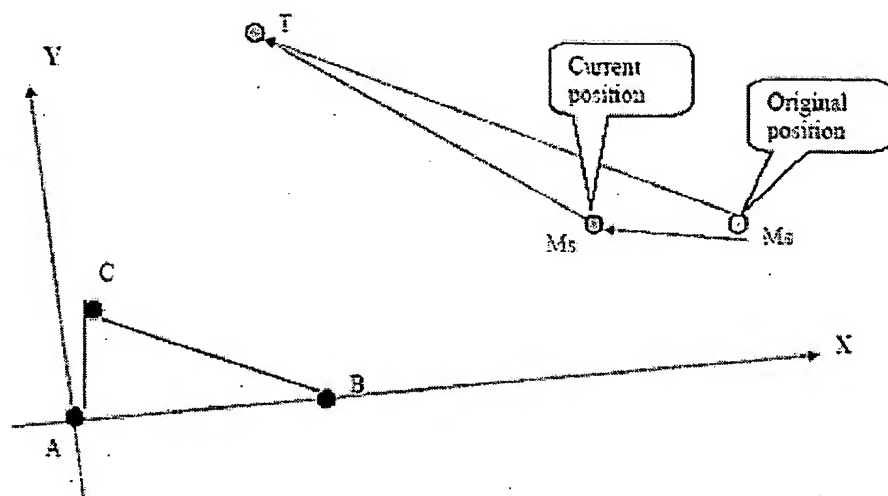


FIG. 38A

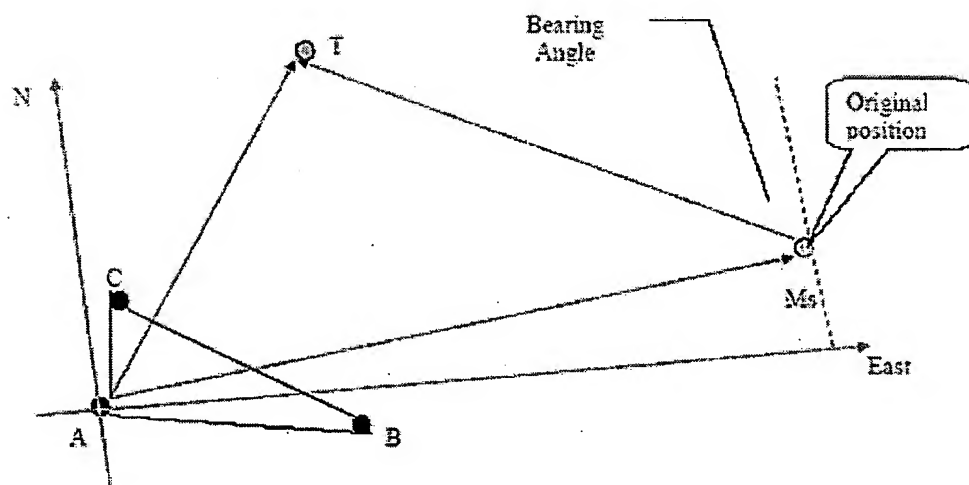


FIG. 38B

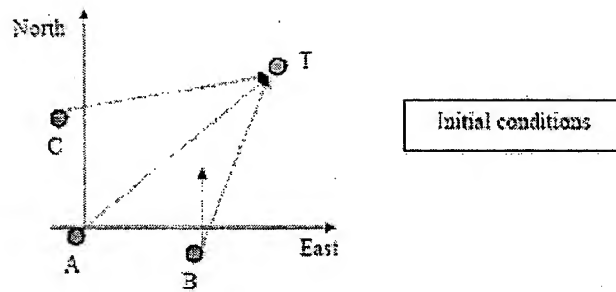


FIG. 39A

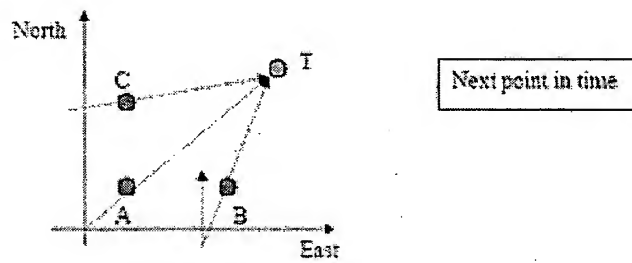


FIG. 39B

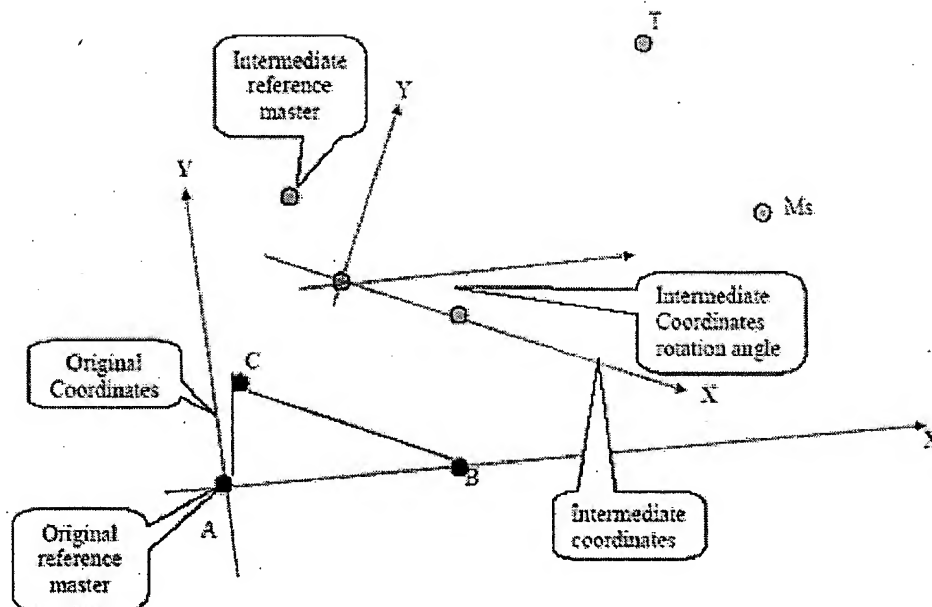
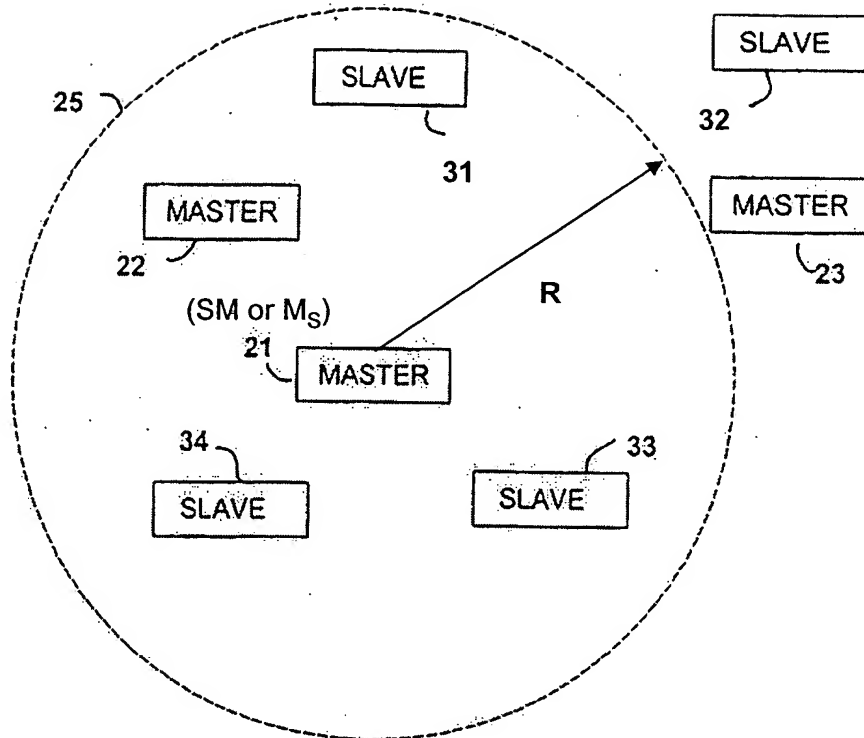


FIG. 40

FIG. 1



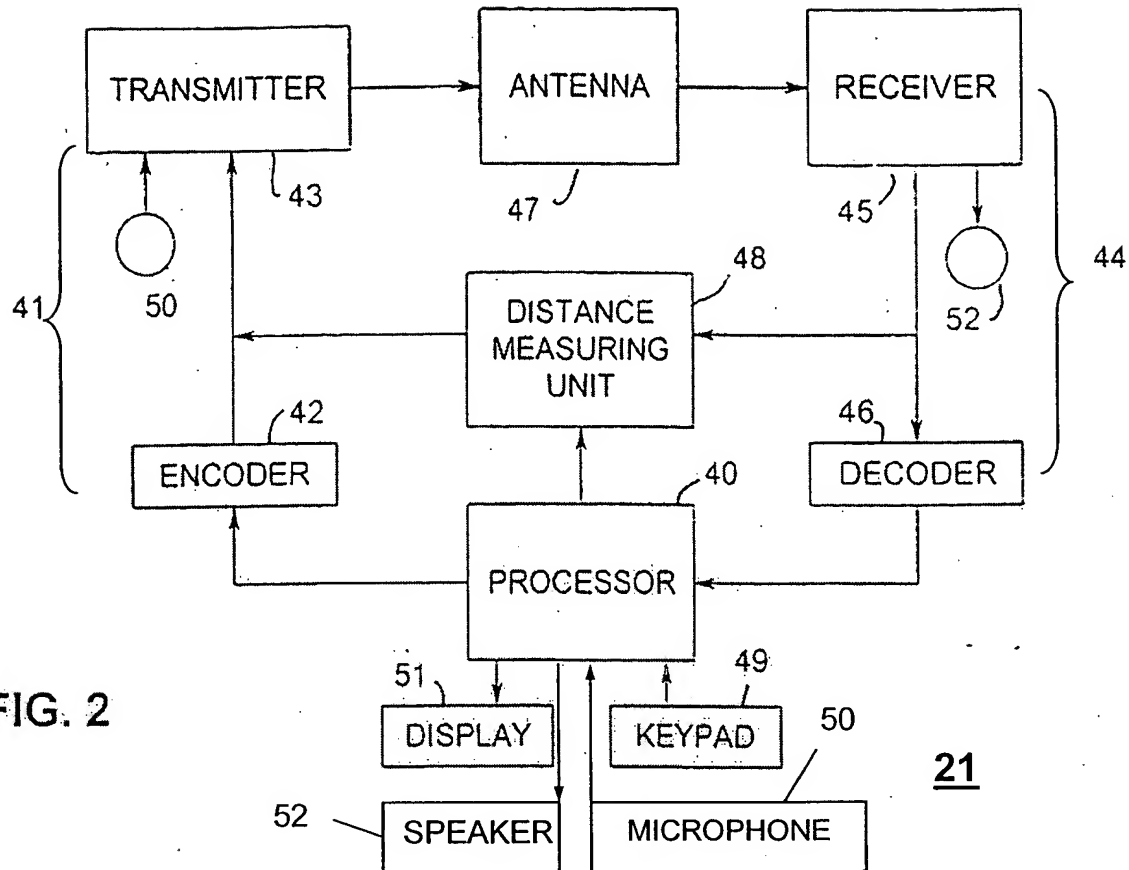


FIG. 2

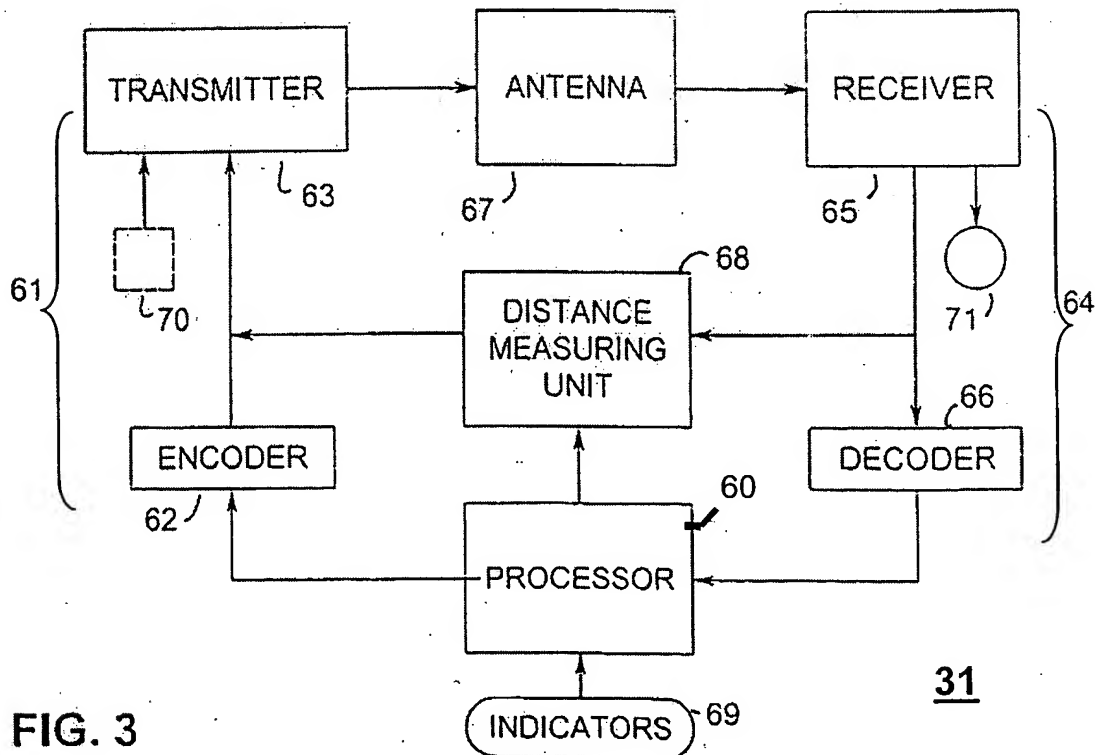
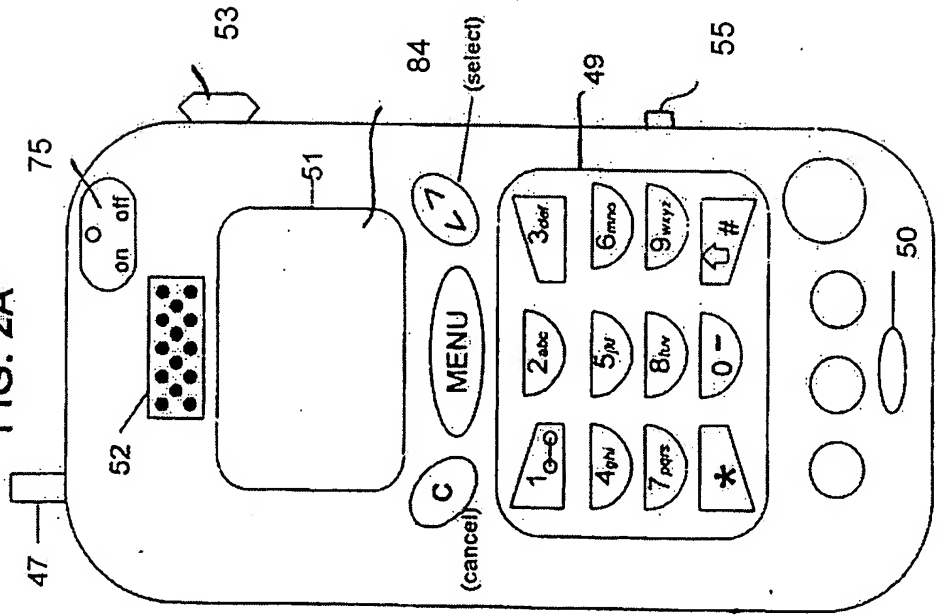


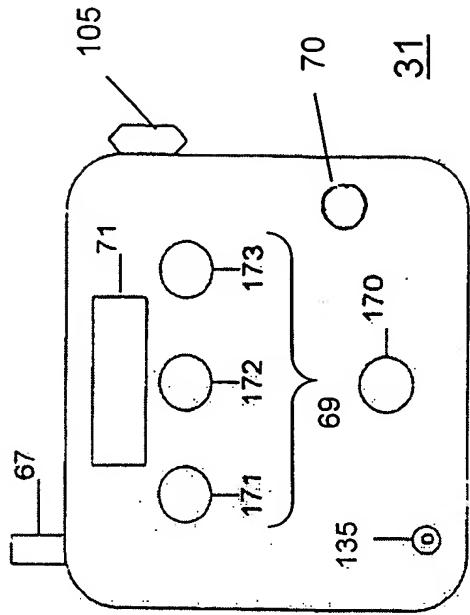
FIG. 3

FIG. 2A



21

FIG. 3A



31

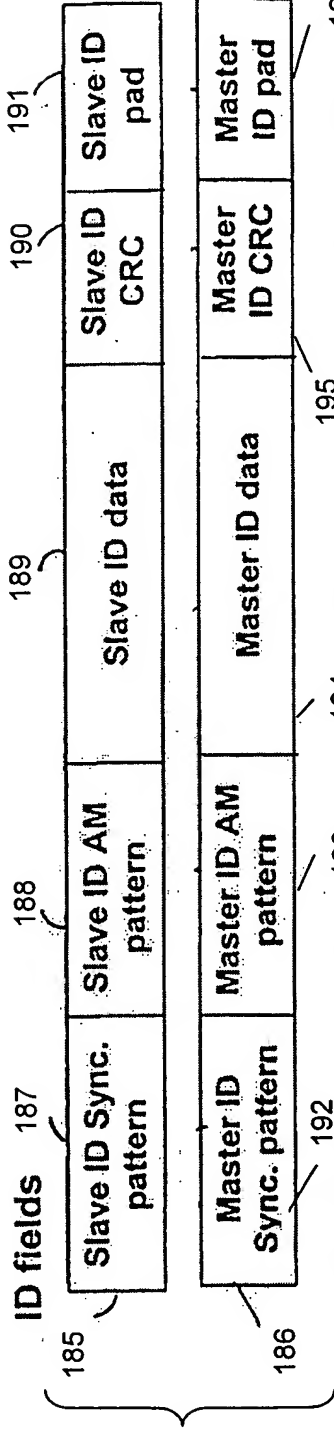
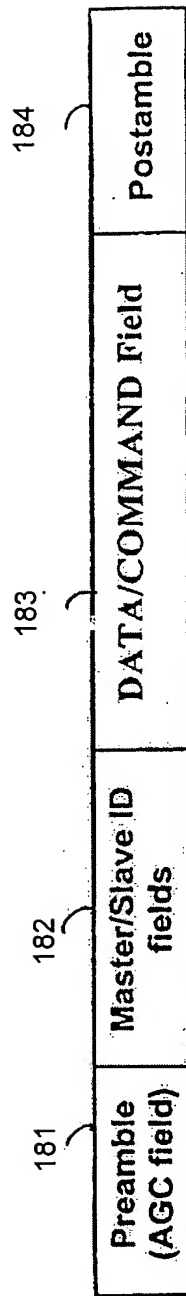


FIG. 3B

FIG. 3C

FIG. 3D

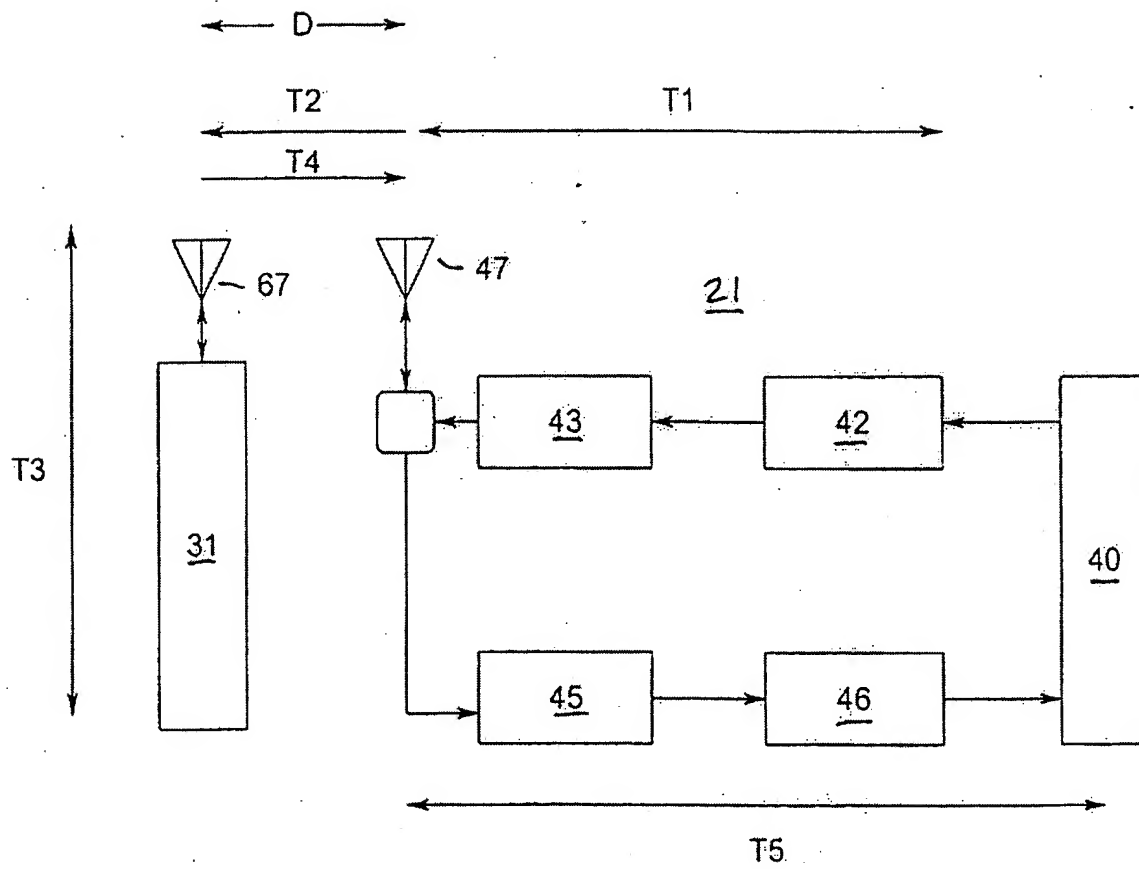


FIG. 4

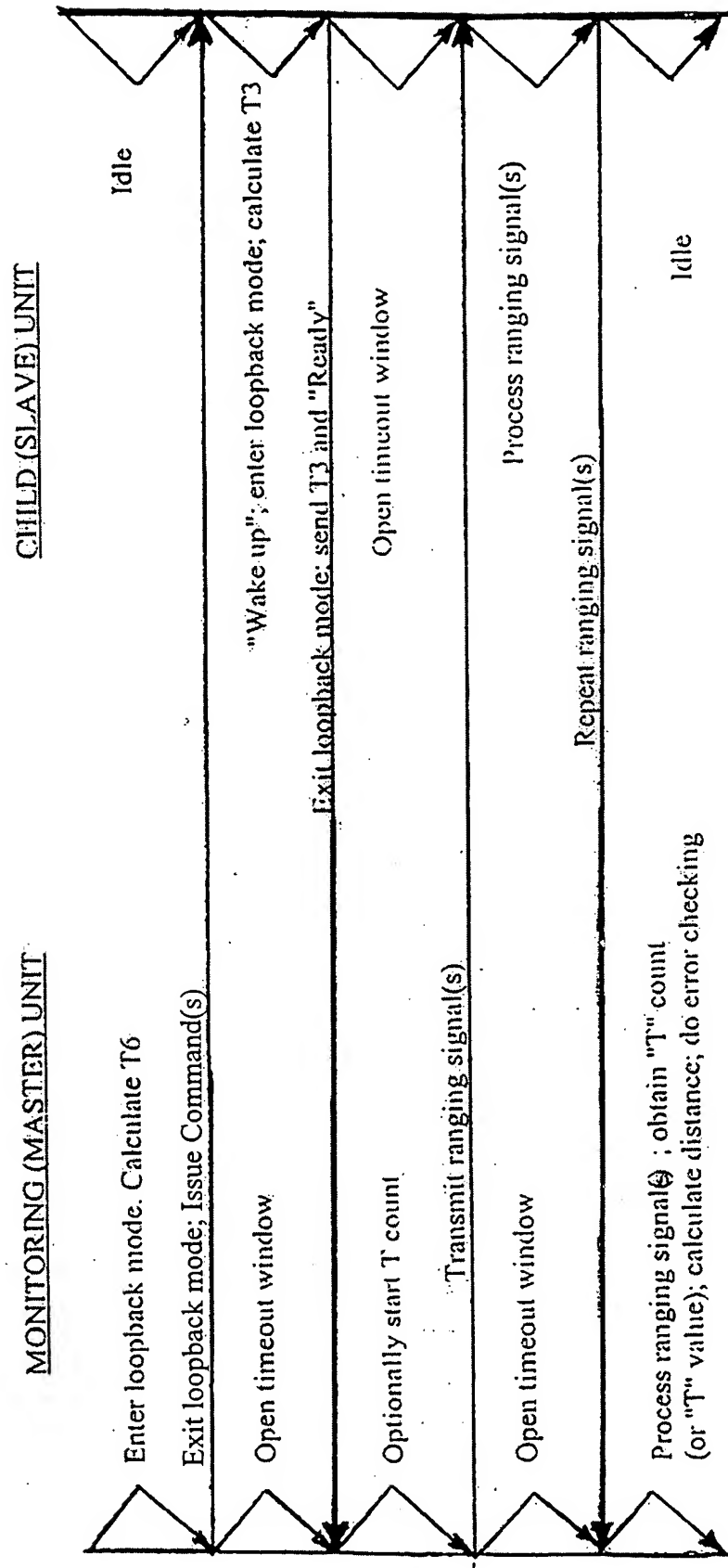
FIG. 4ADISTANCE/TIME MEASUREMENT SEQUENCE - OPTION 1

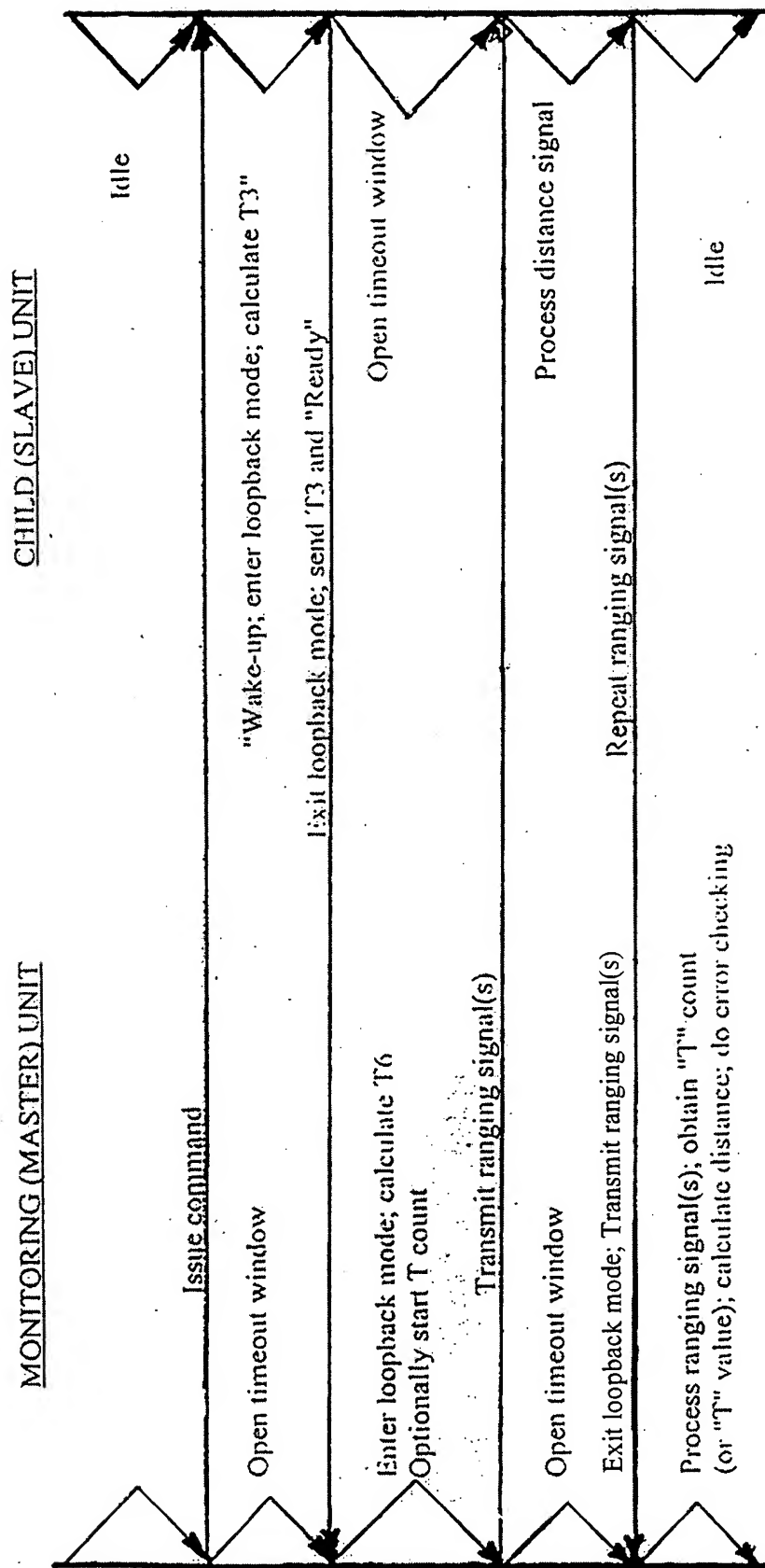
FIG. 4BDISTANCE/TIME MEASUREMENT SEQUENCE - OPTION 2

FIG. 5

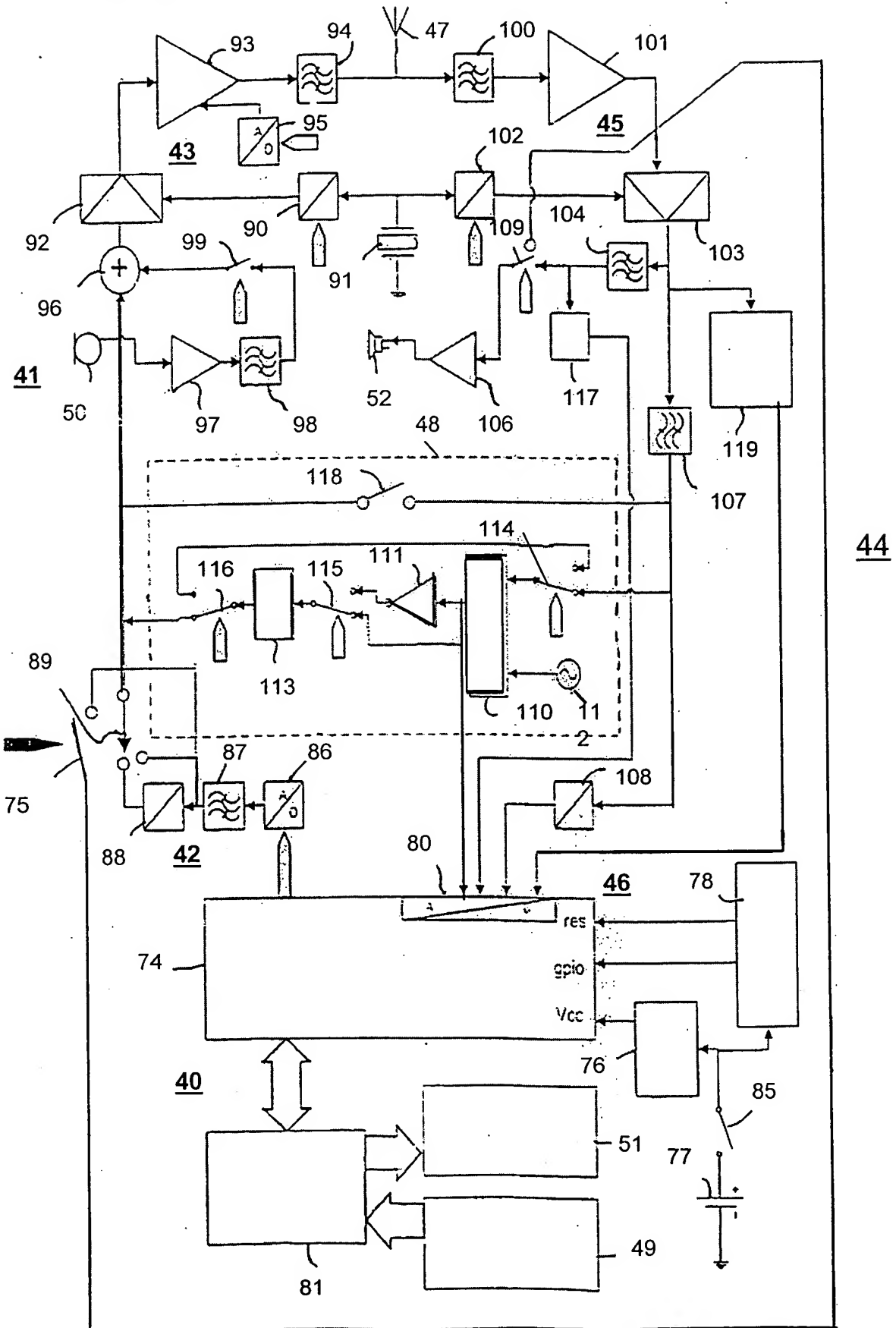
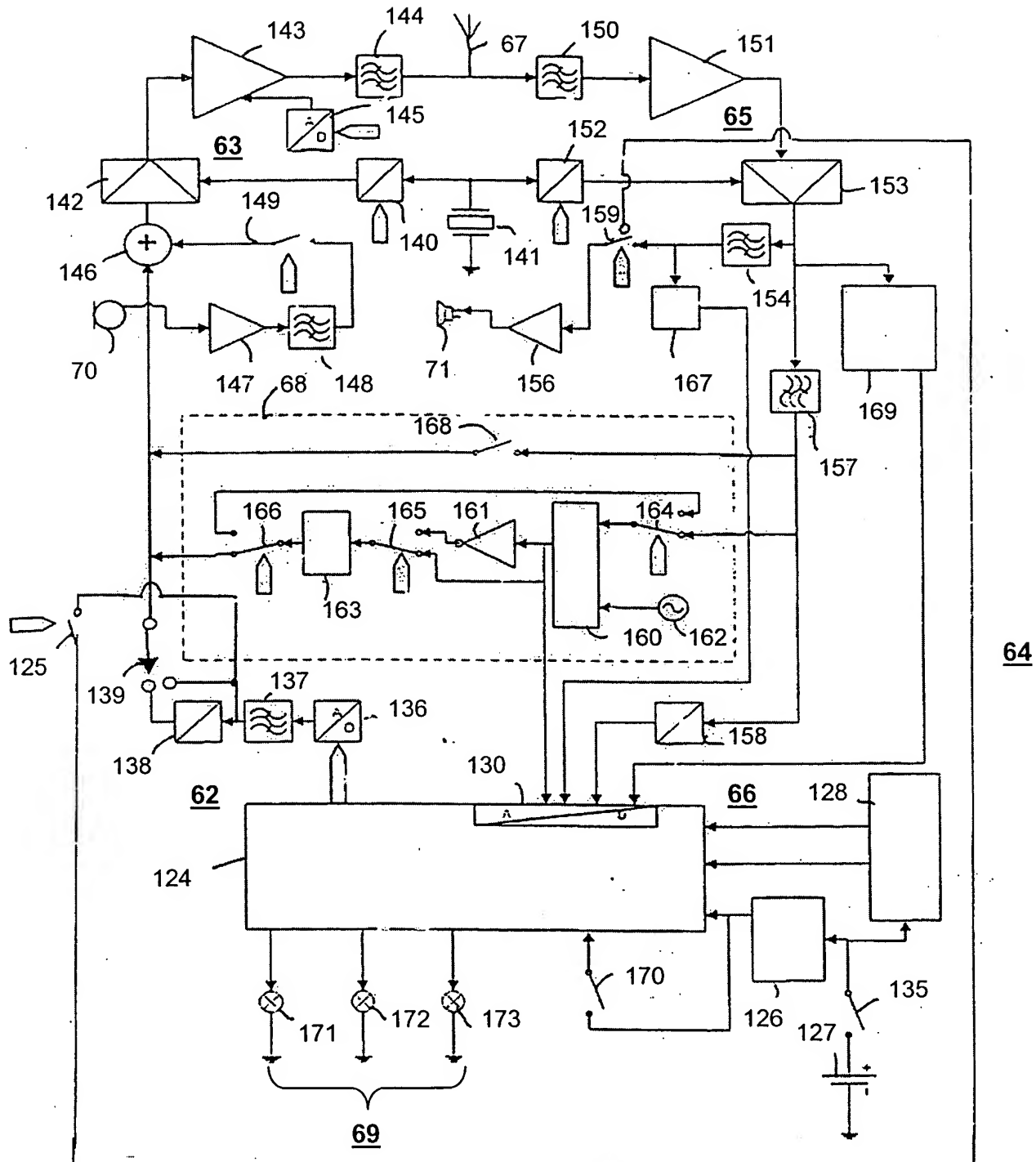


FIG. 6A



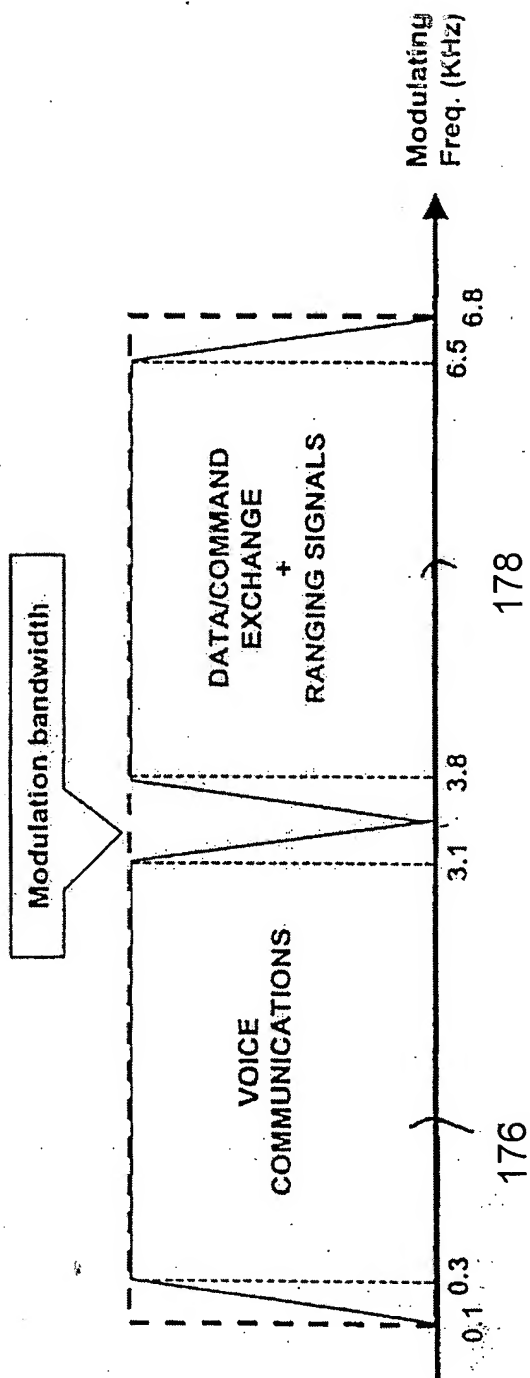


FIG. 6B

Position Determination Example

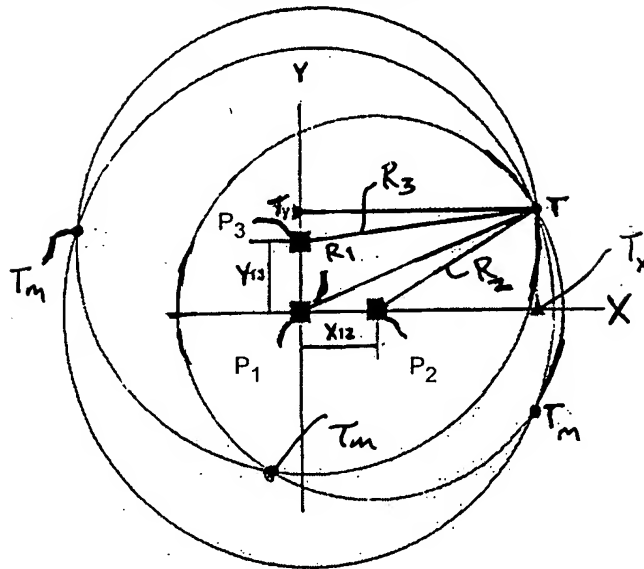


FIG. 7

Position Determination Ambiguity

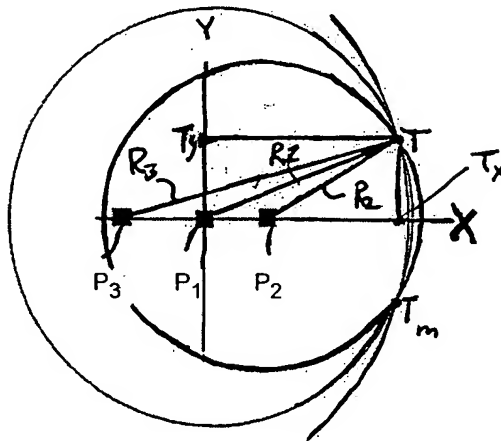


FIG. 8

Position ambiguity and distance measurement error

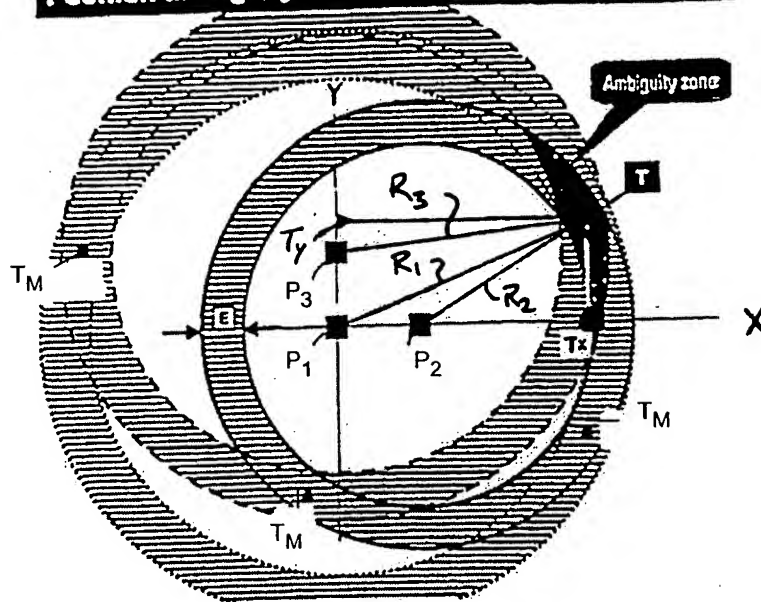


FIG. 9

Ambiguity reduction, example 1

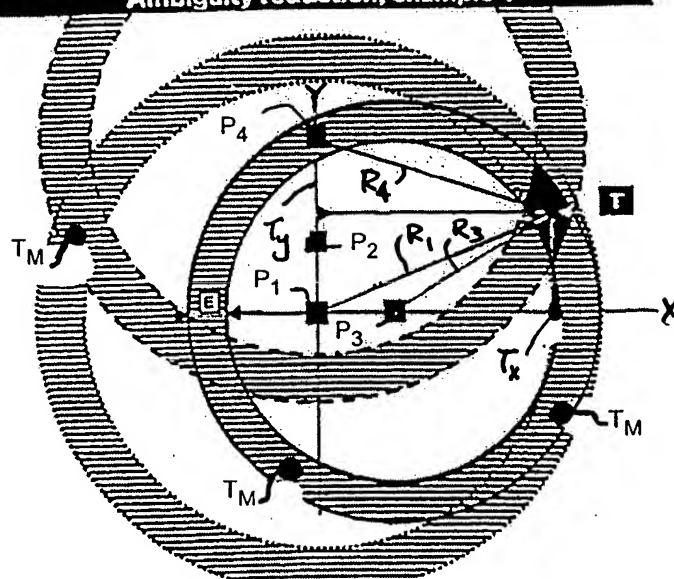


FIG. 10

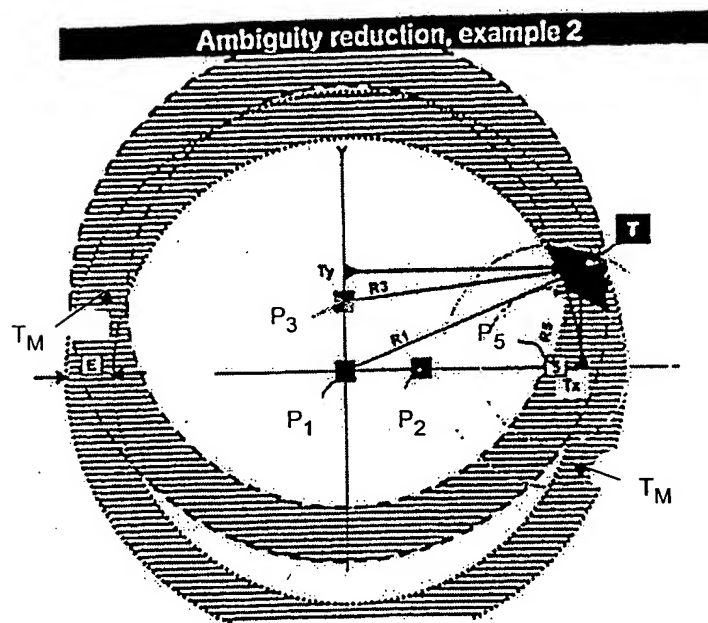
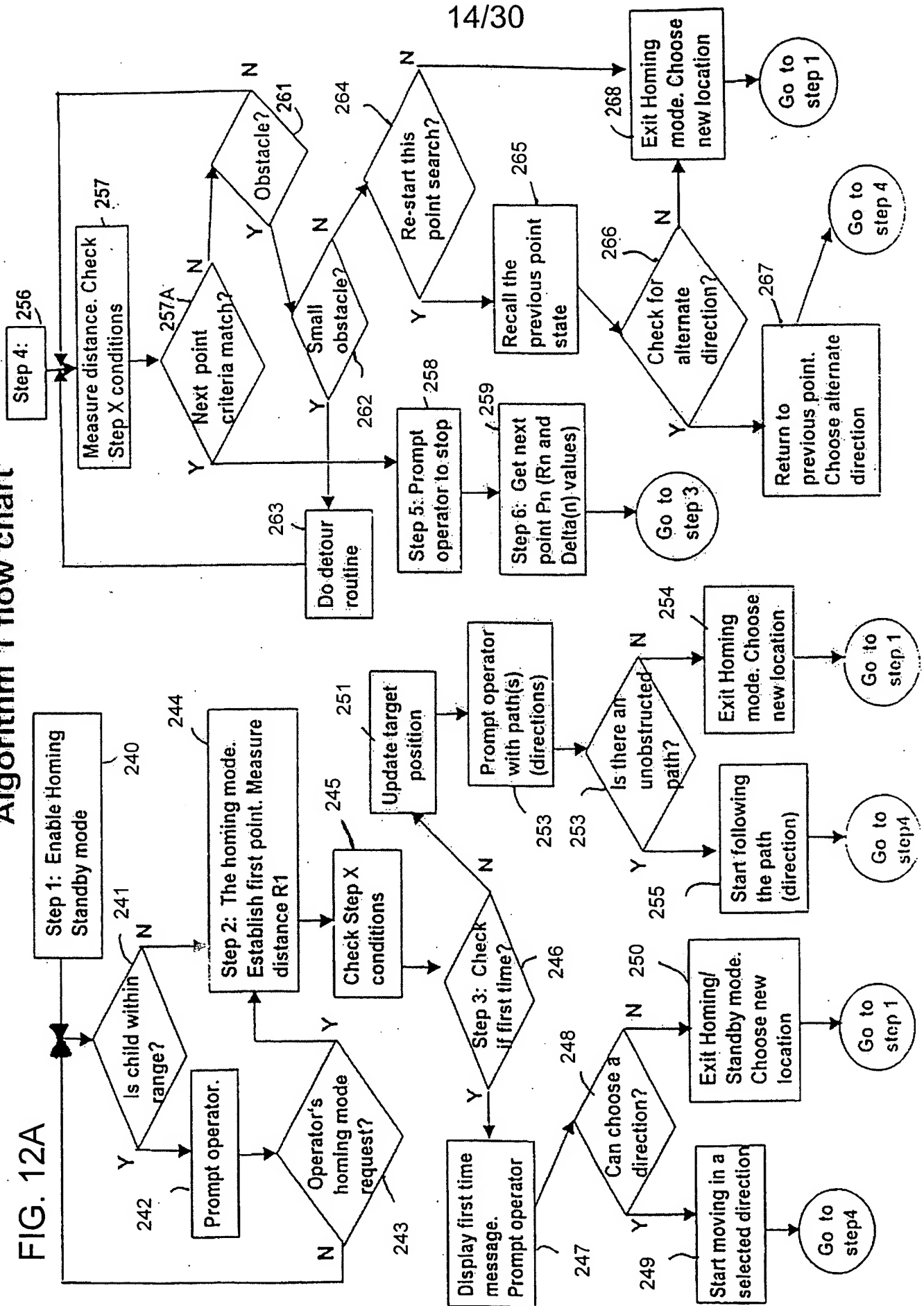


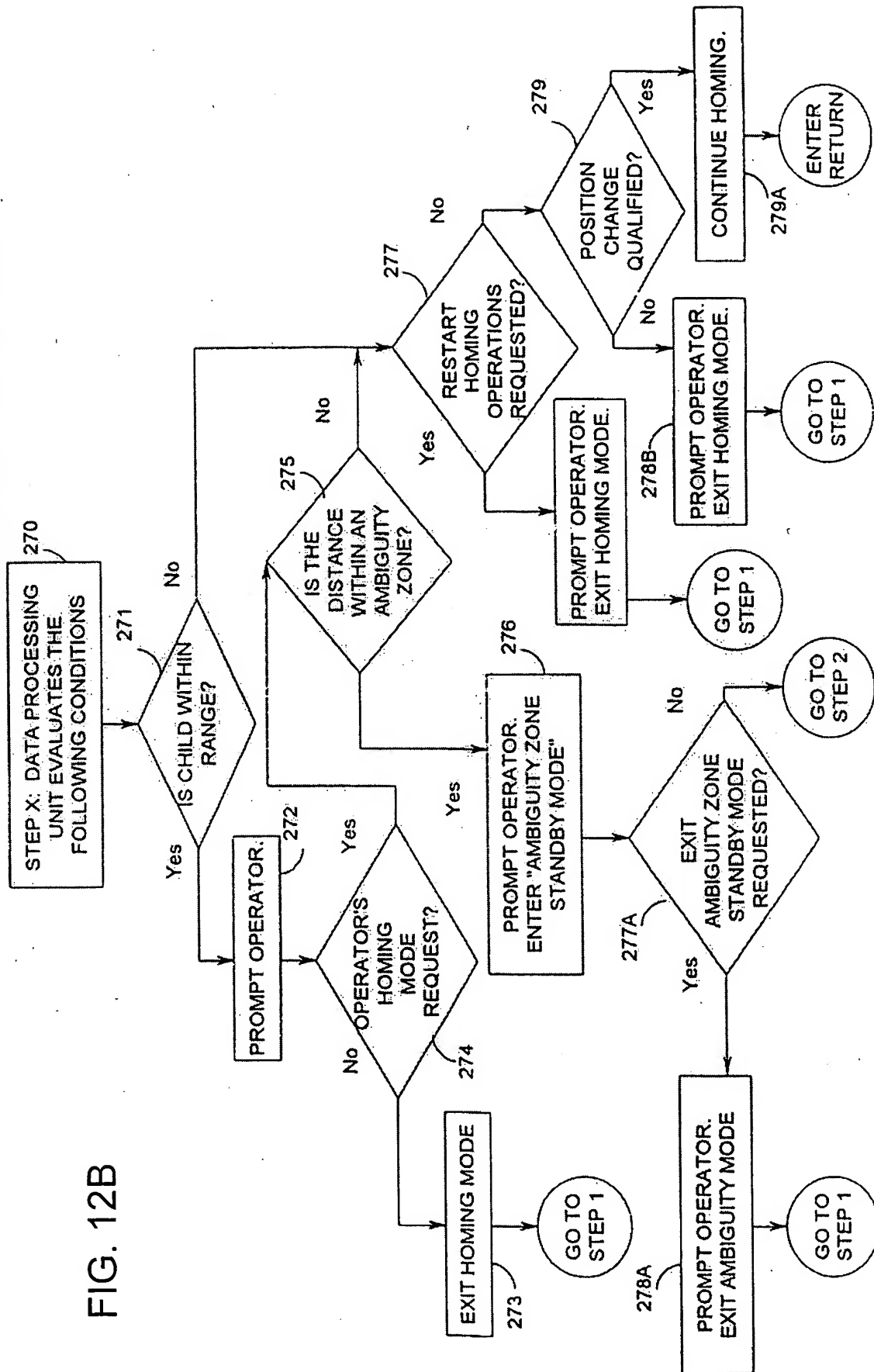
FIG. 11

Algorithm 1 flow chart

FIG. 12A



ALGORITHM 1 FLOW CHART, CONTINUED



Algorithm 2 flow chart

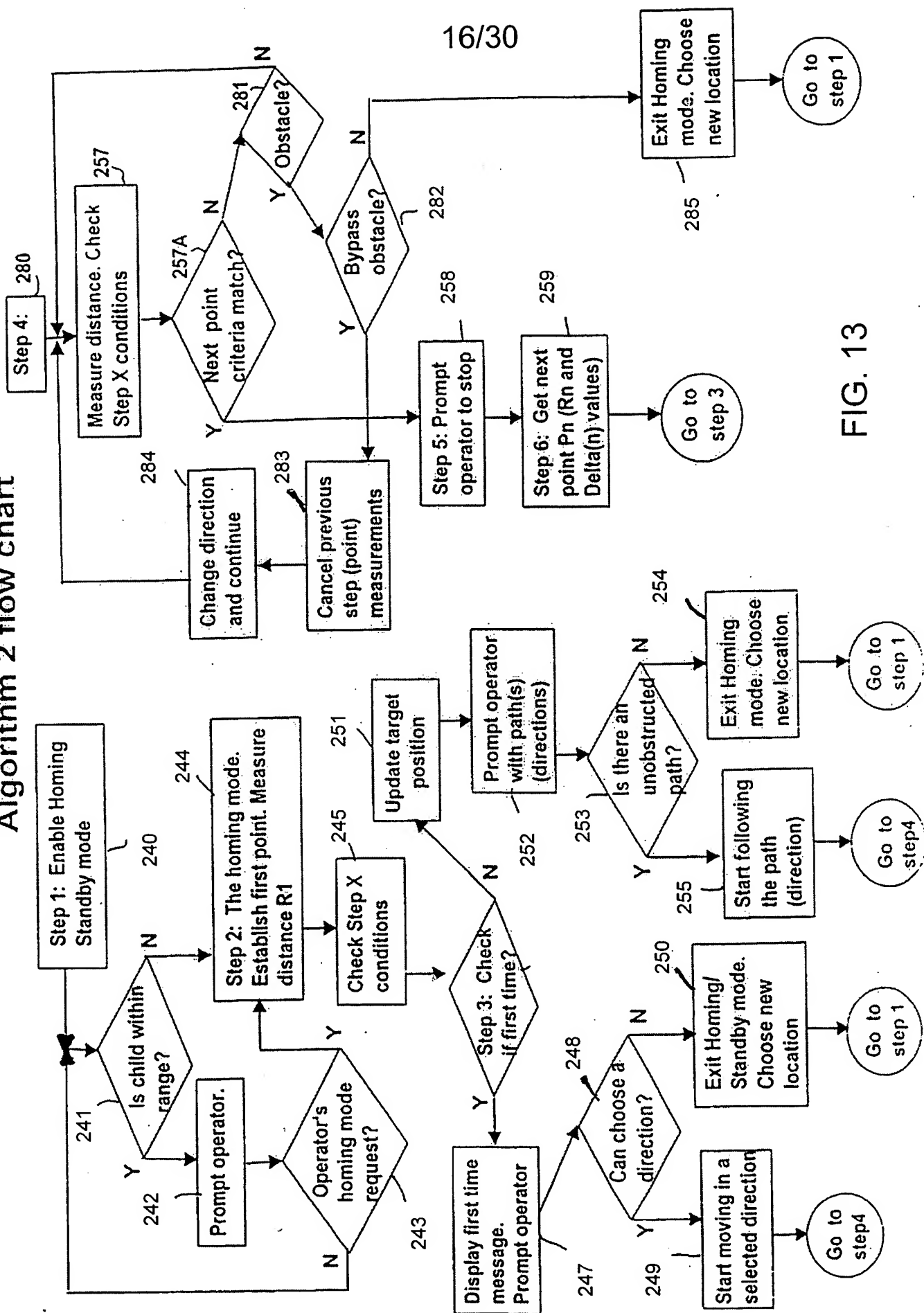
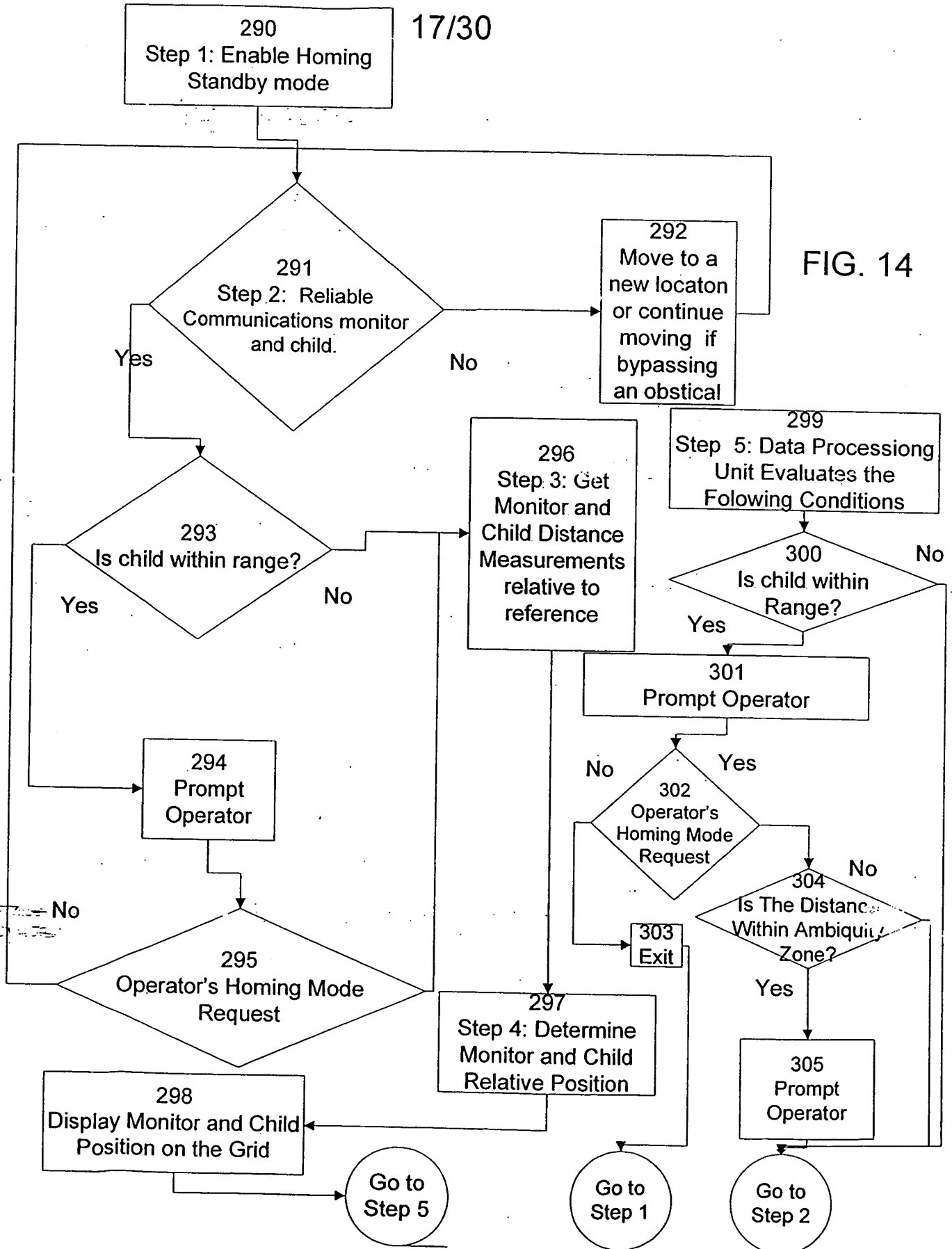


FIG. 13

FIG. 14



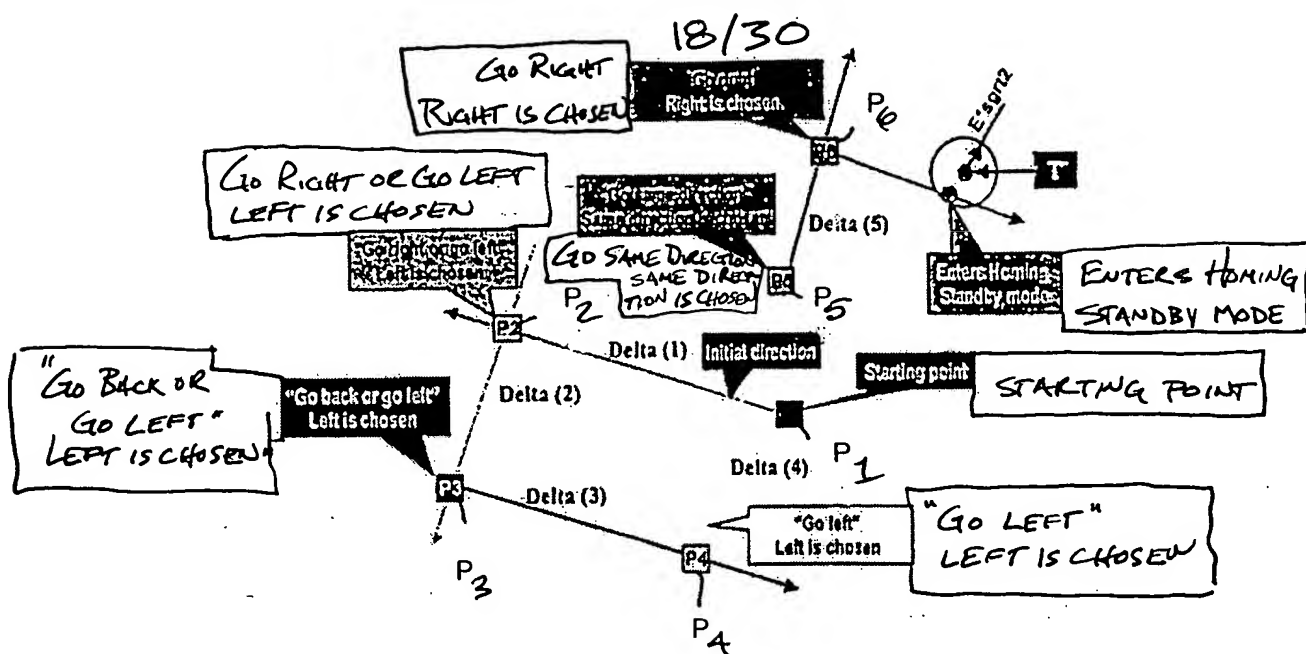


FIG. 15

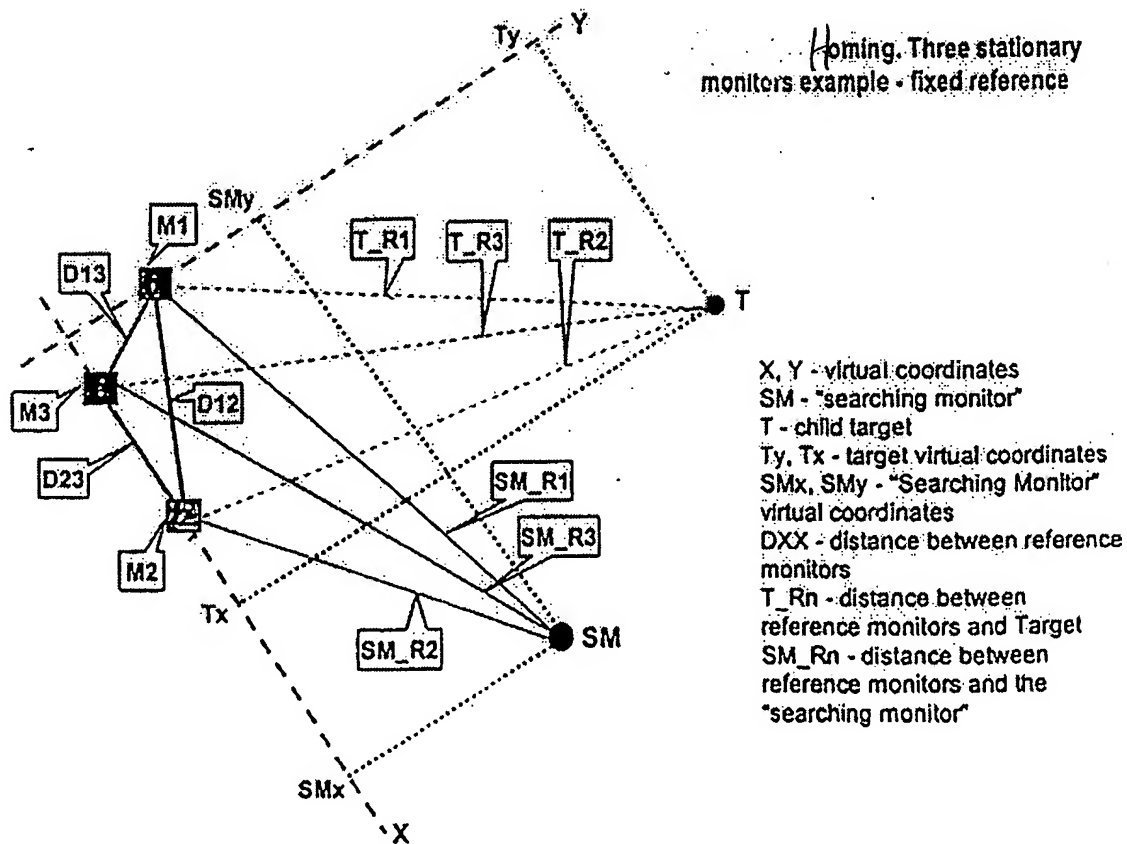


FIG. 16

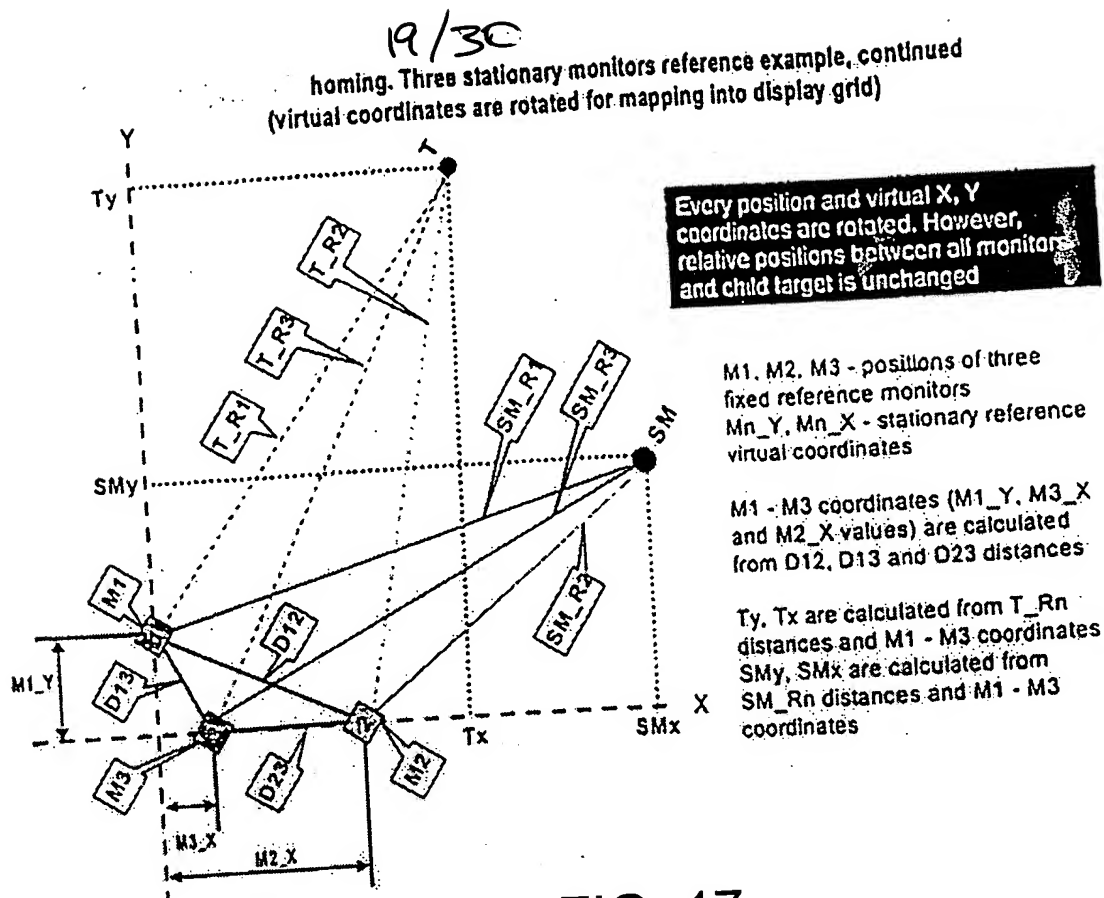


FIG. 17

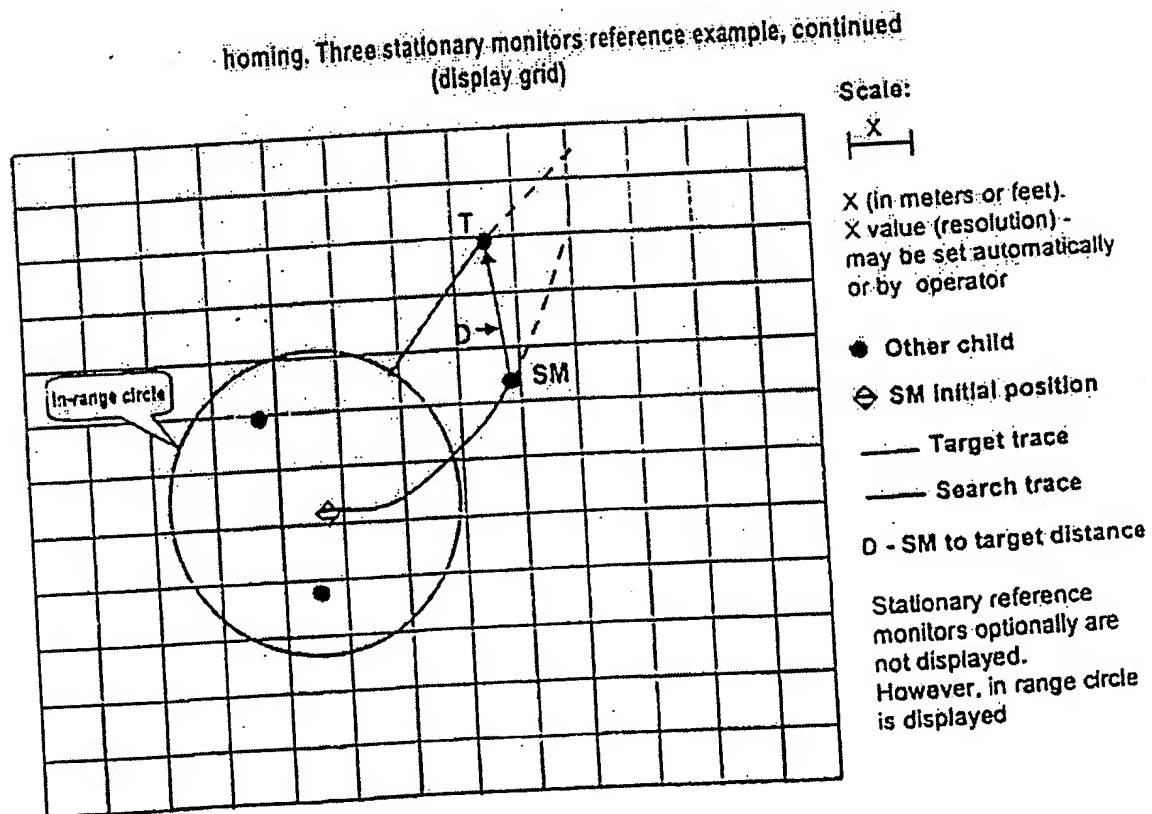


FIG. 18

2 homing. Three stationary child devices reference example, continued

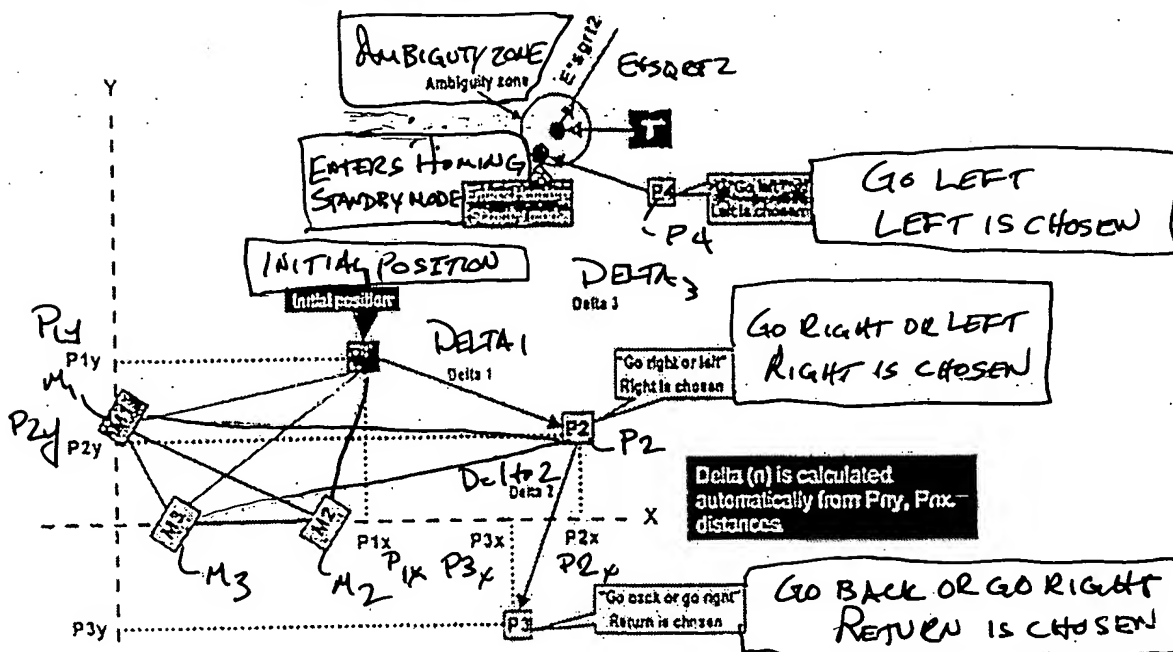


FIG. 21

homing. Three stationary child devices reference example, continued
(obstacle avoidance/bypassing)

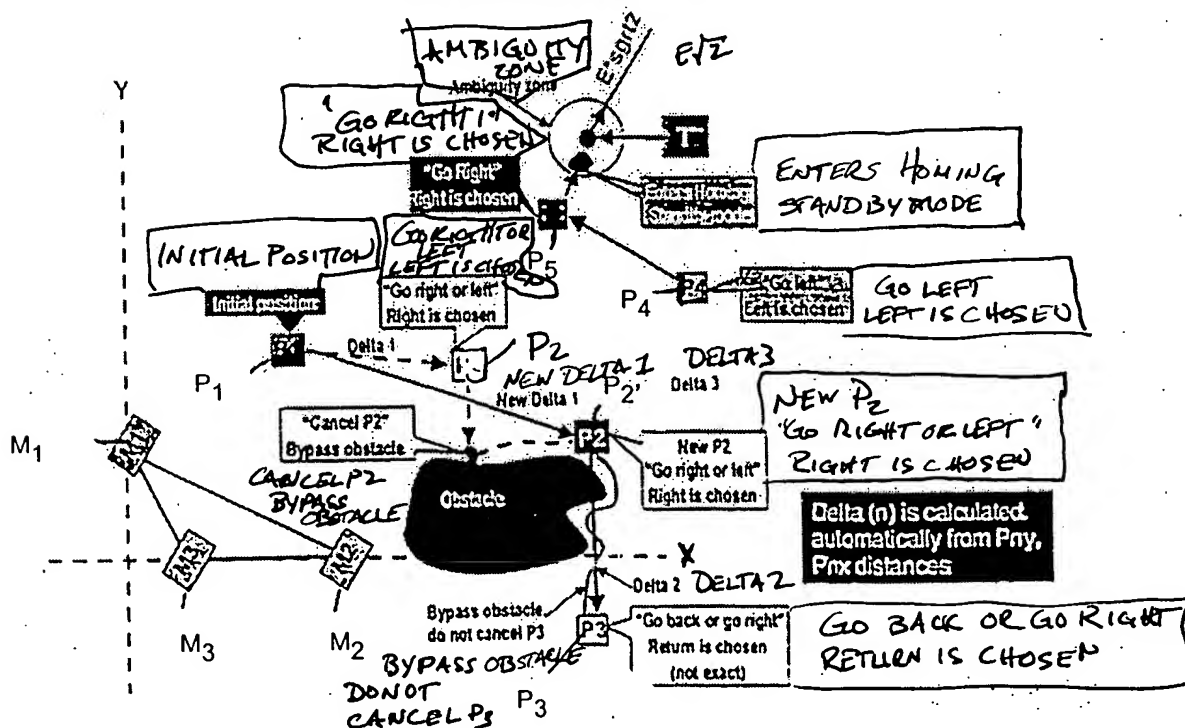


FIG. 22

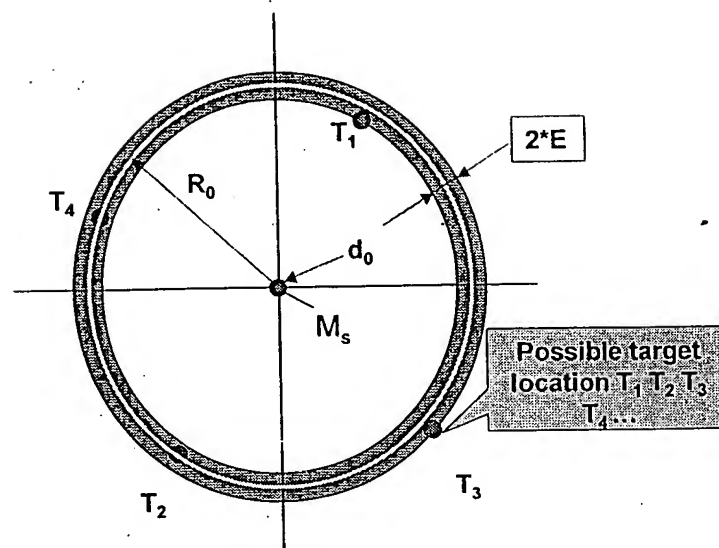


FIG. 23

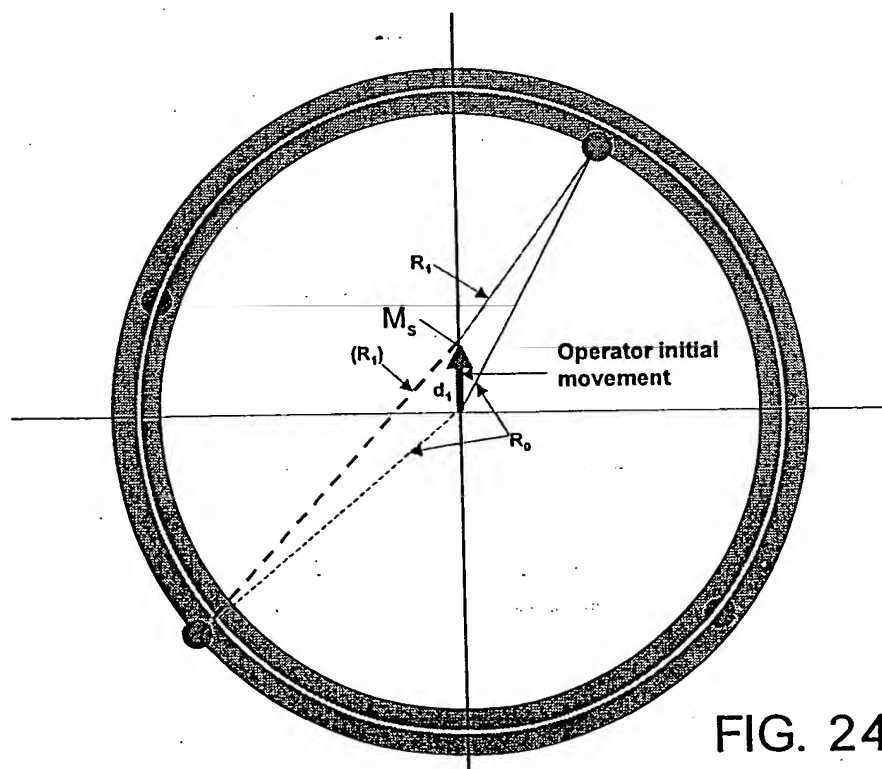


FIG. 24

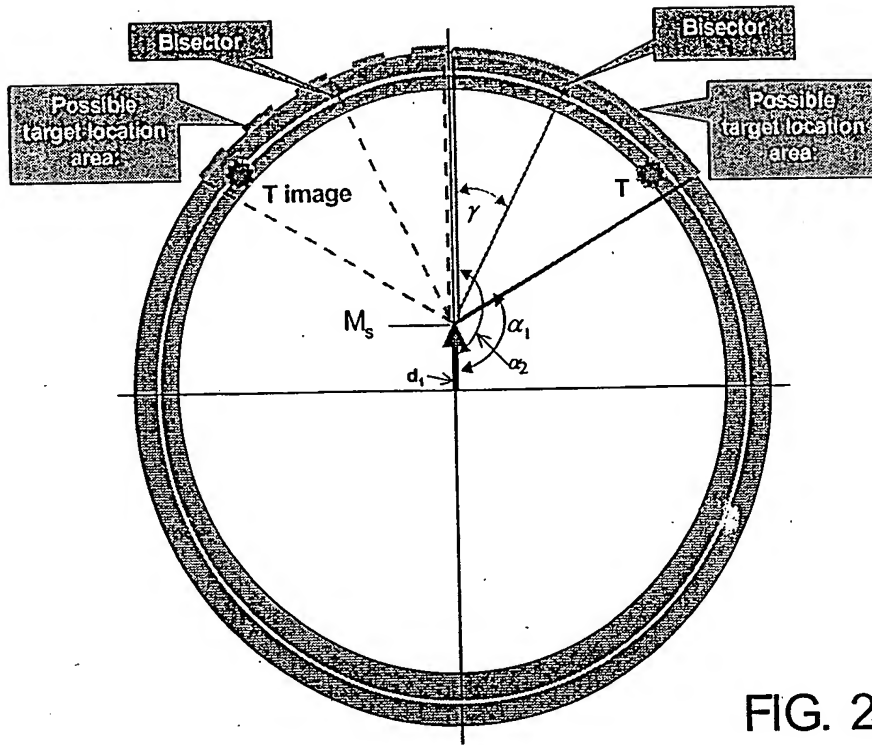


FIG. 25

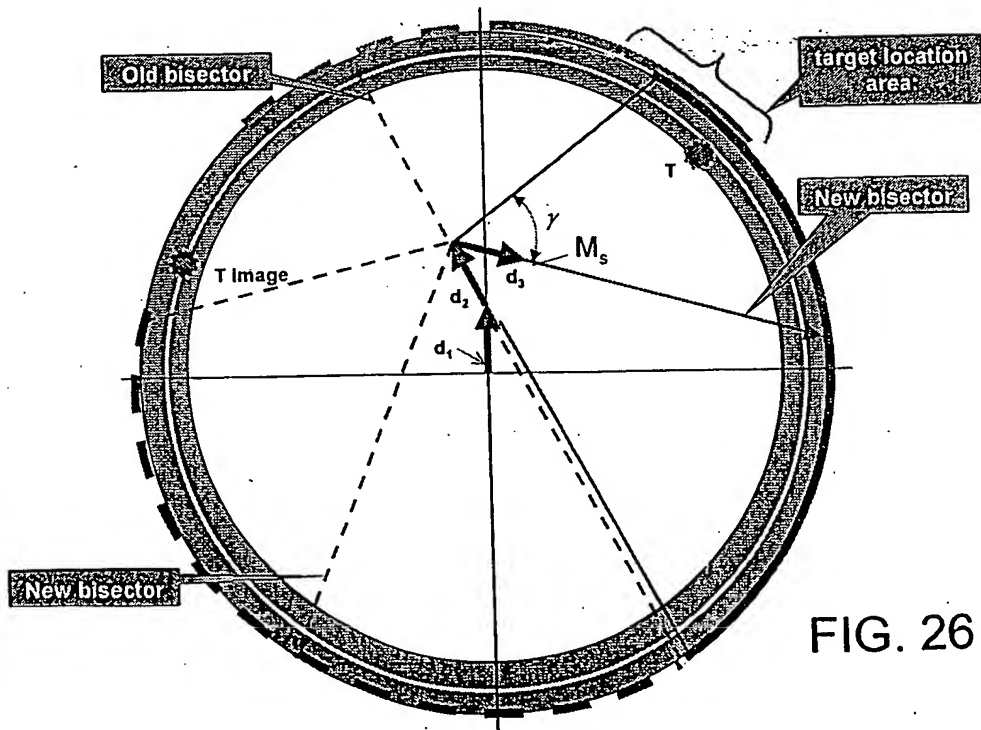
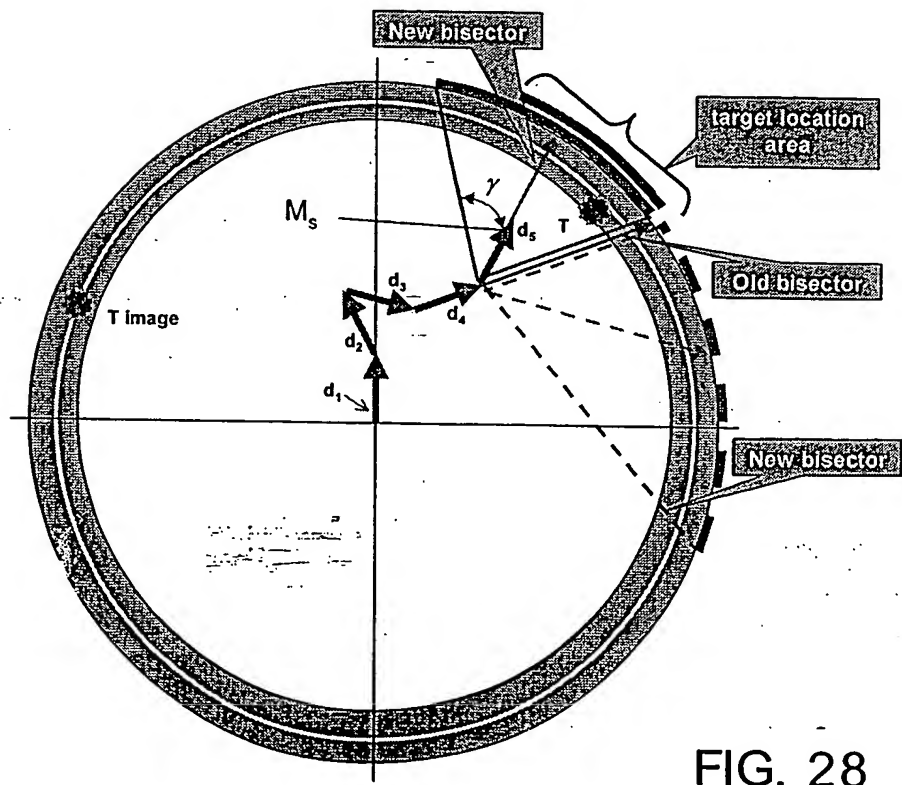
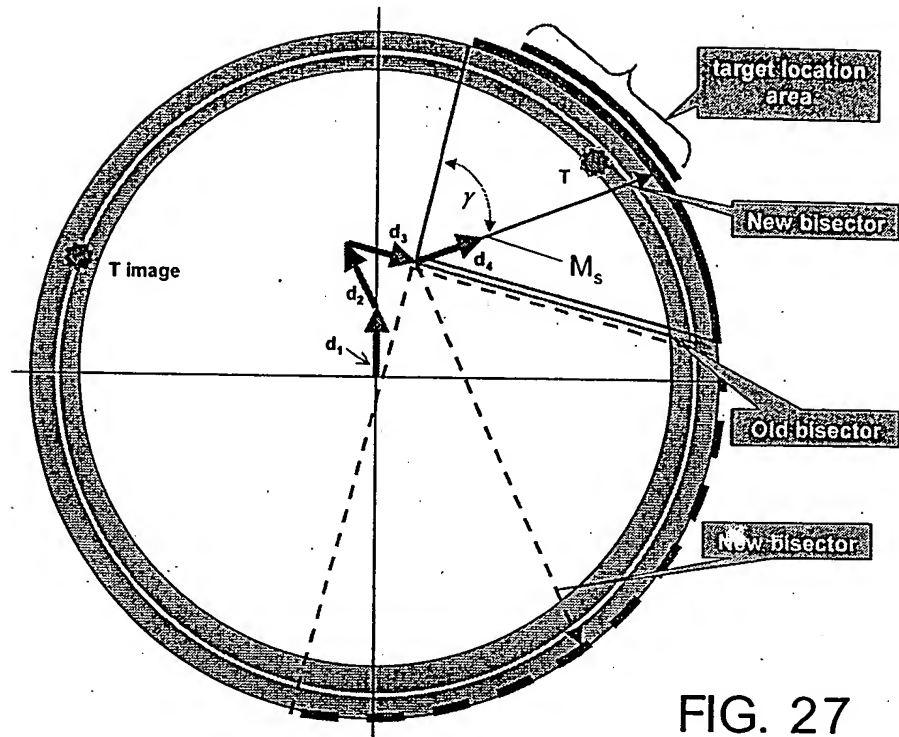


FIG. 26



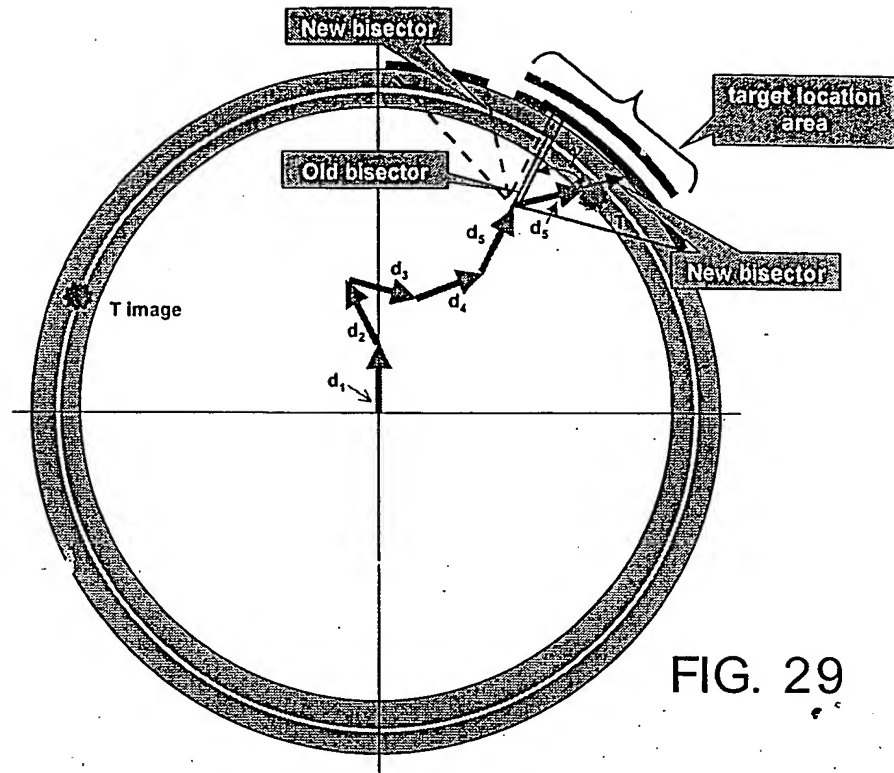


FIG. 29

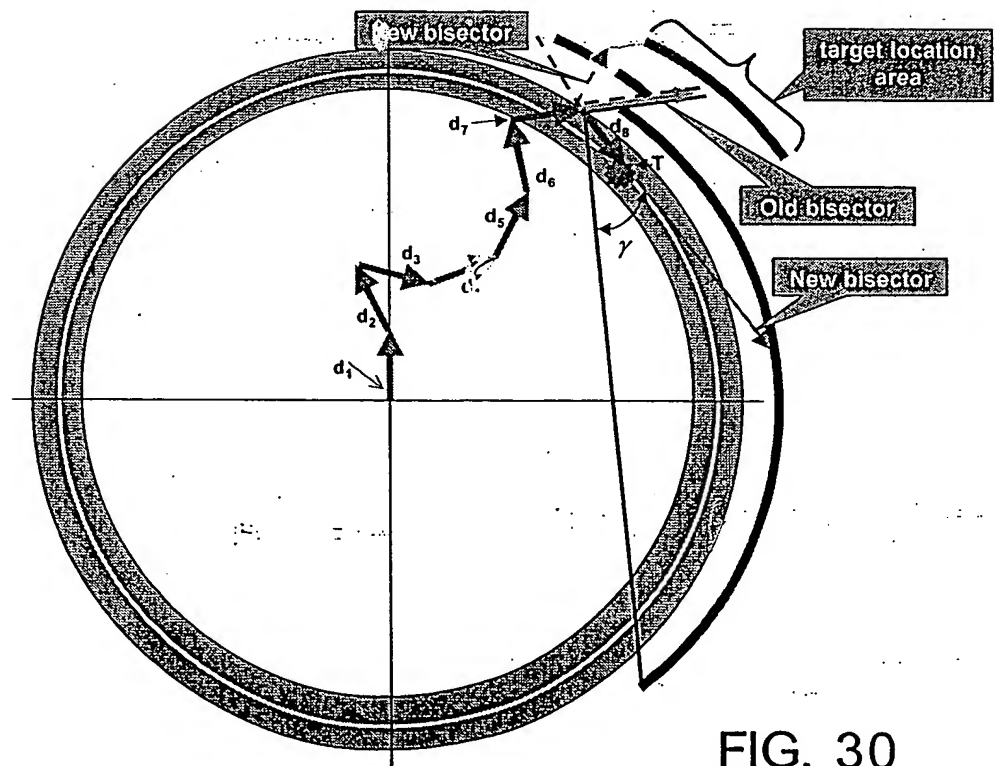


FIG. 30

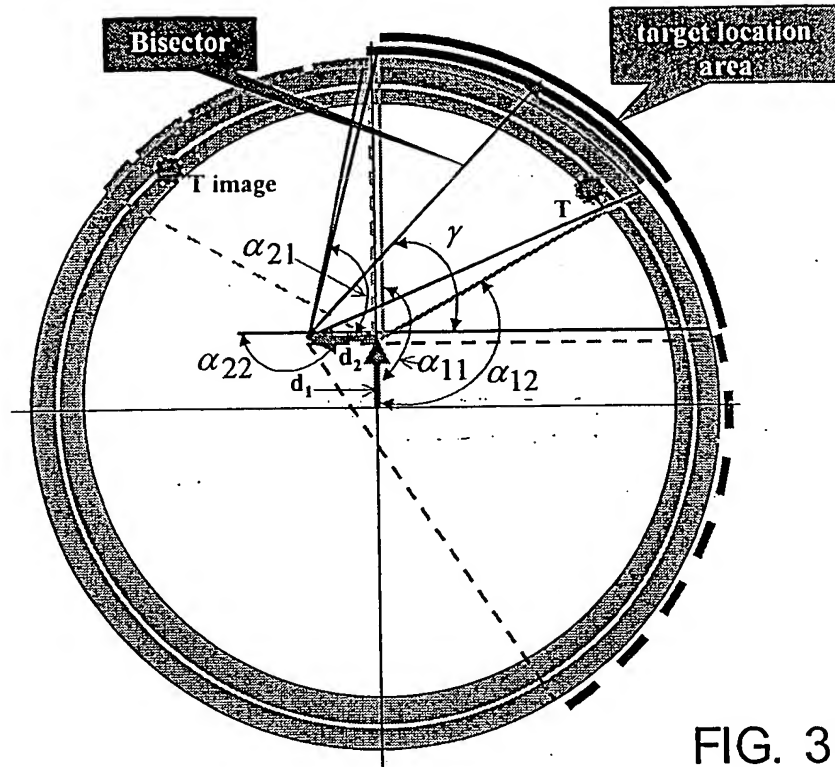


FIG. 31

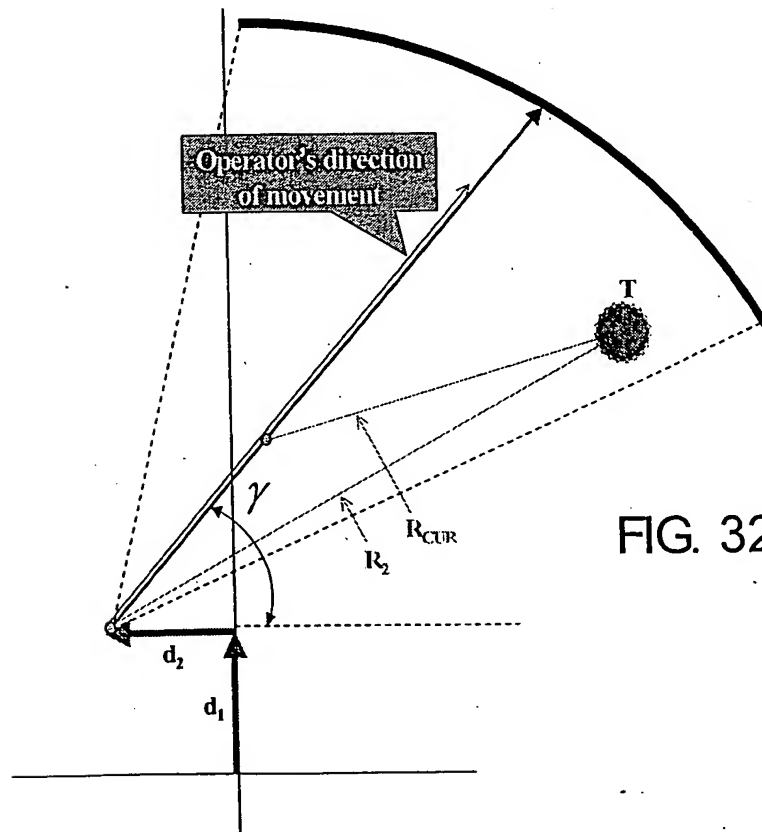


FIG. 32

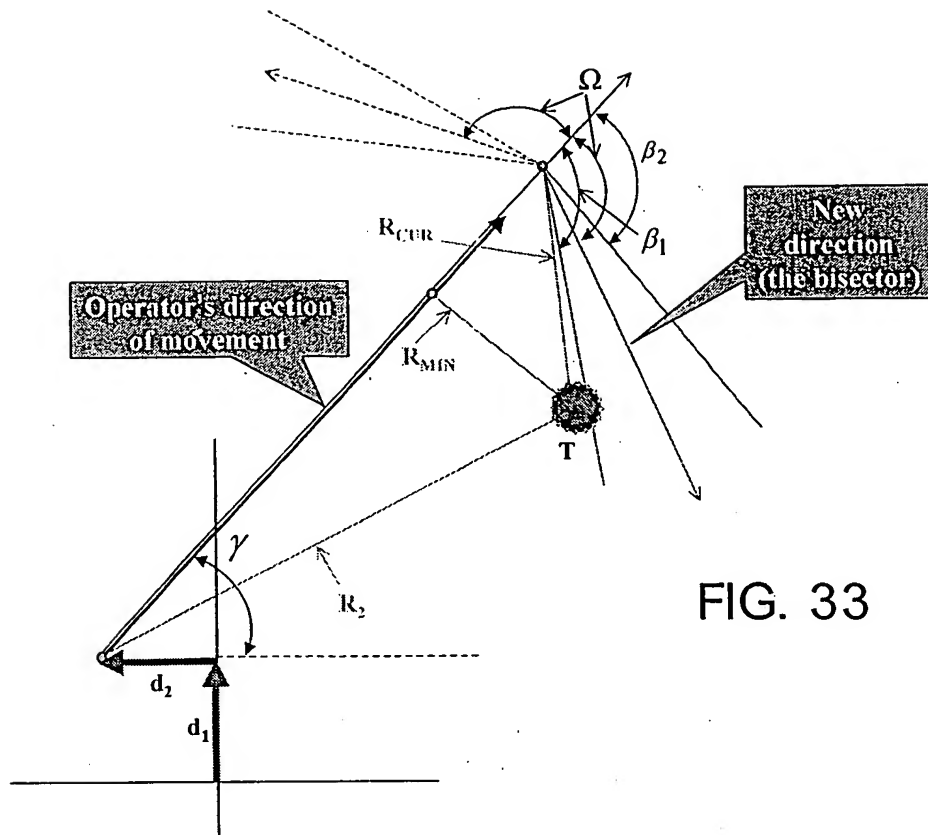


FIG. 33

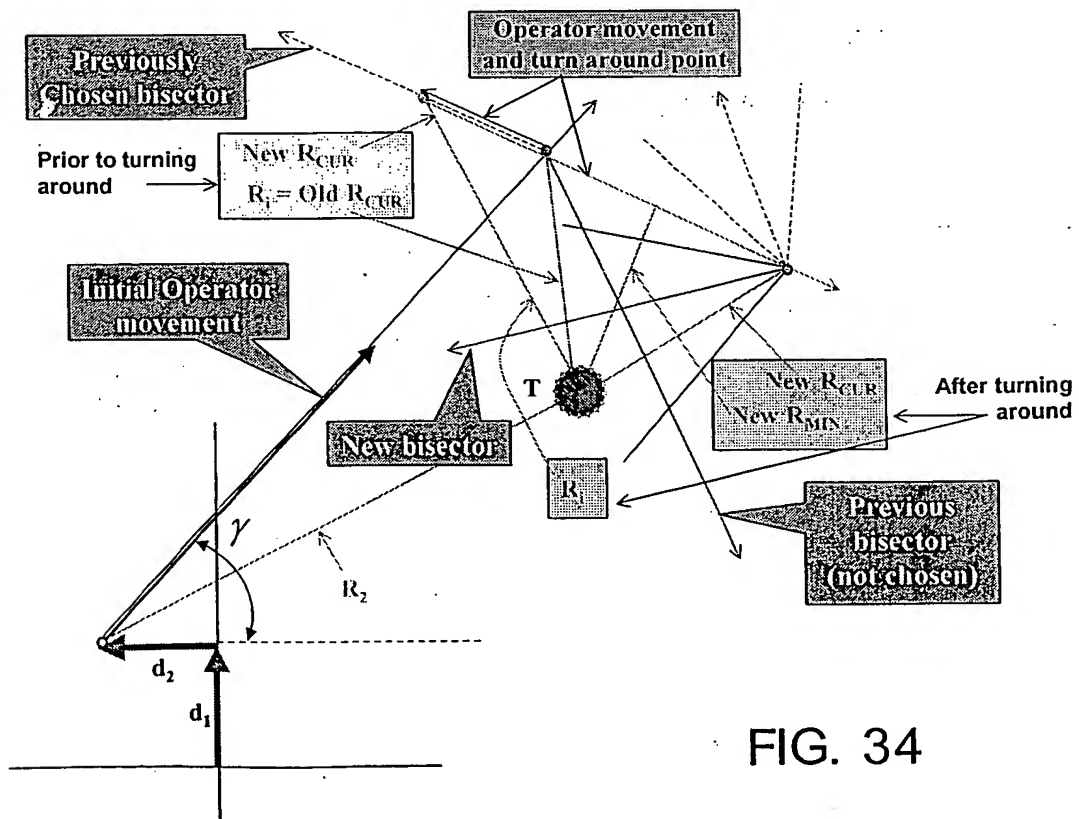


FIG. 34

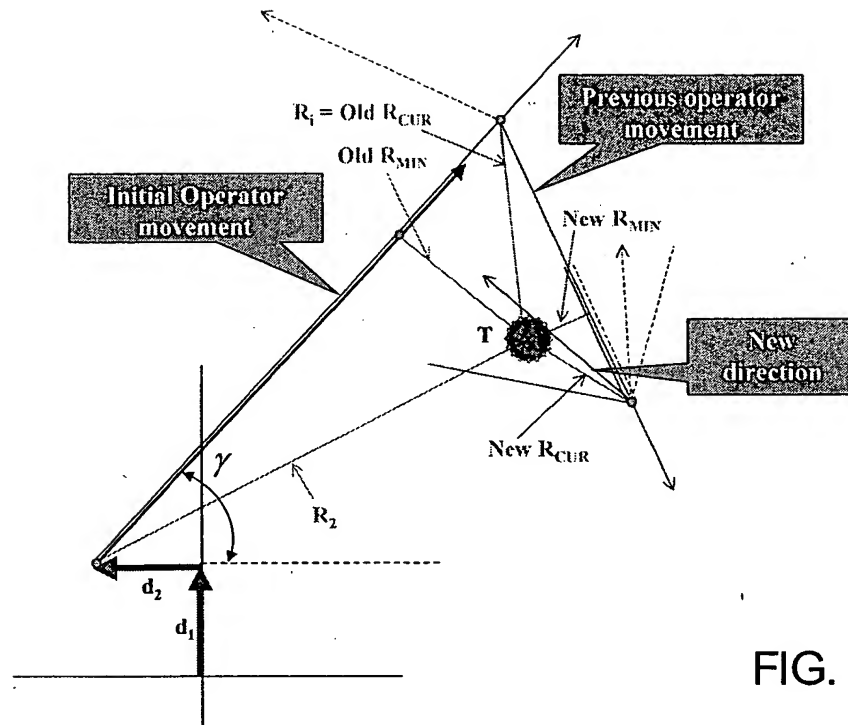


FIG. 35

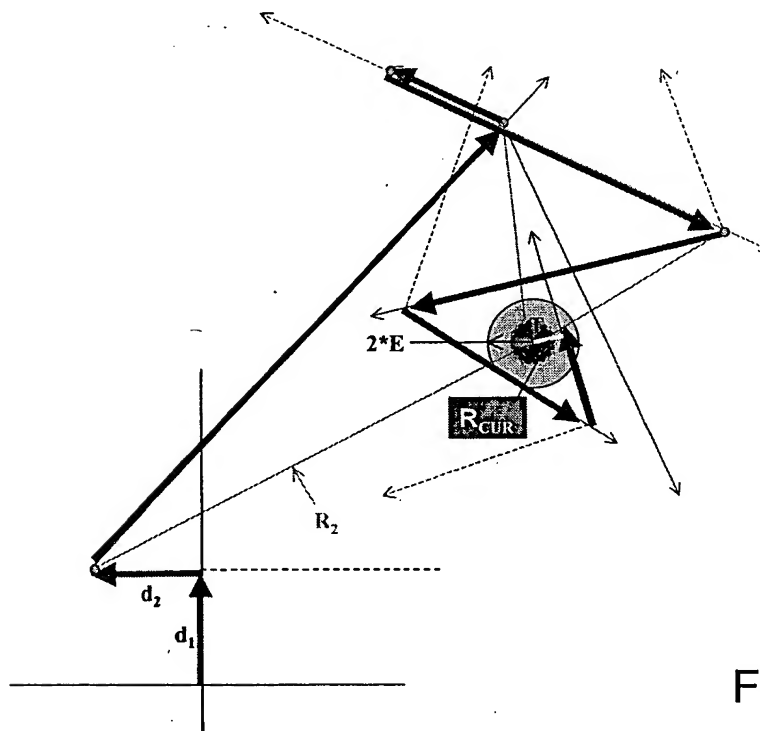


FIG. 36

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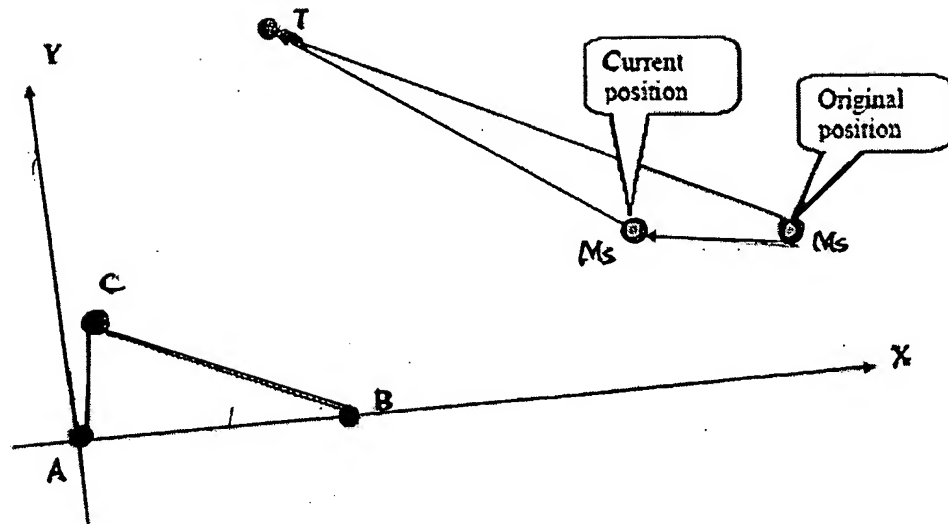


FIG. 37A

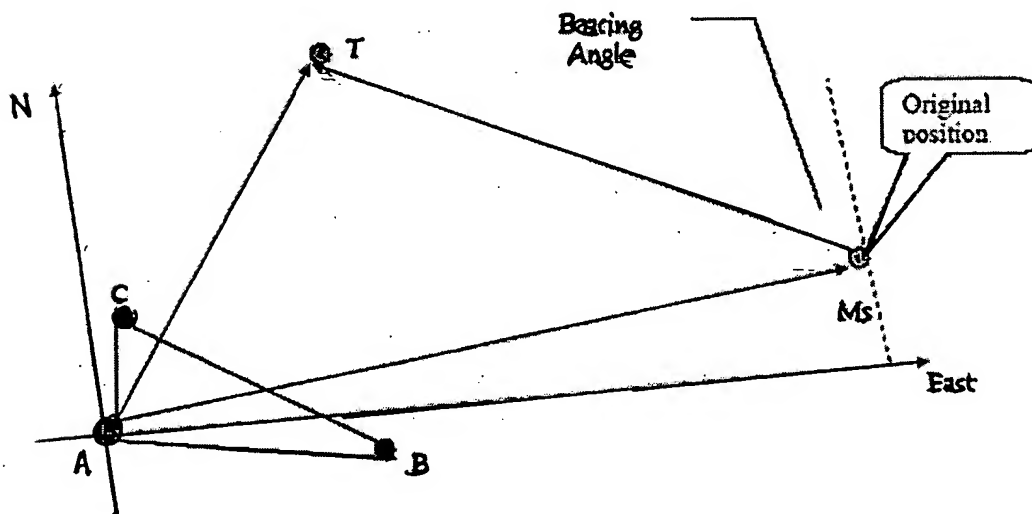


FIG. 37B

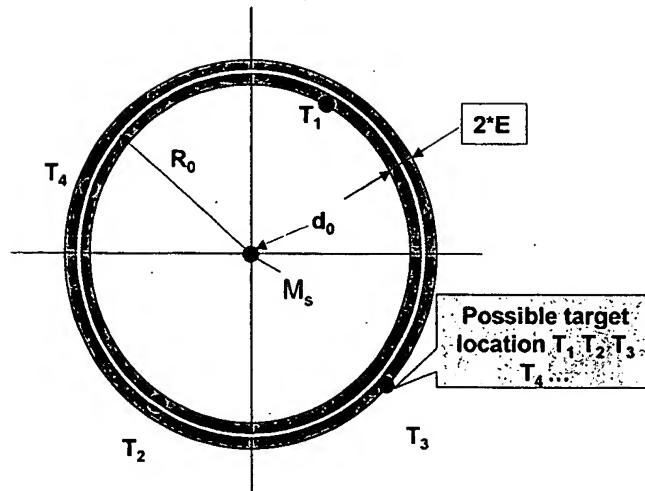


FIG. 23

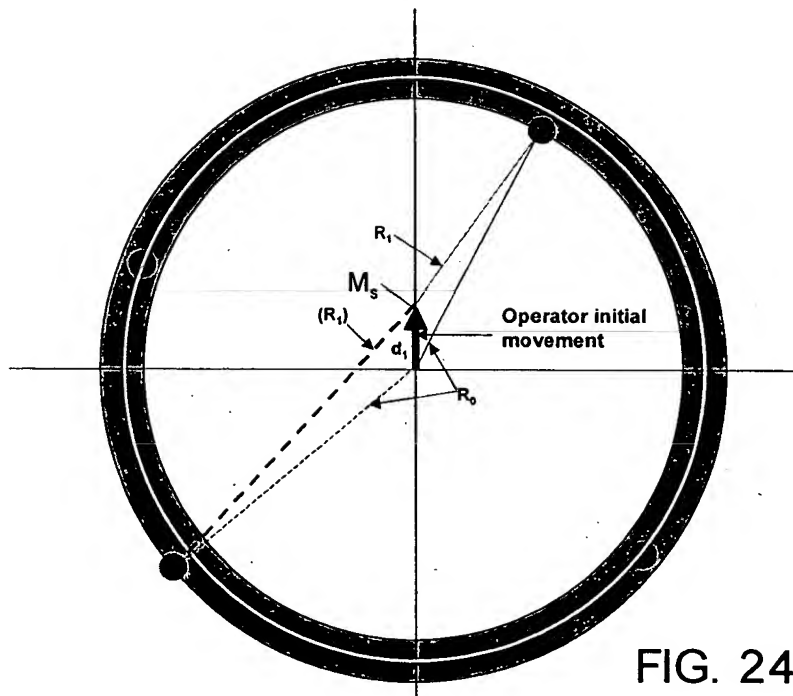


FIG. 24

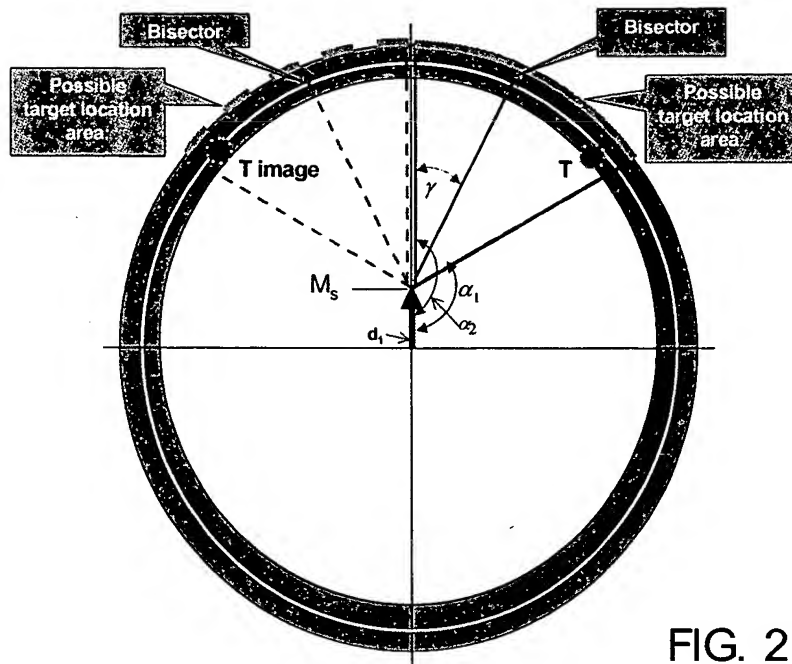


FIG. 25

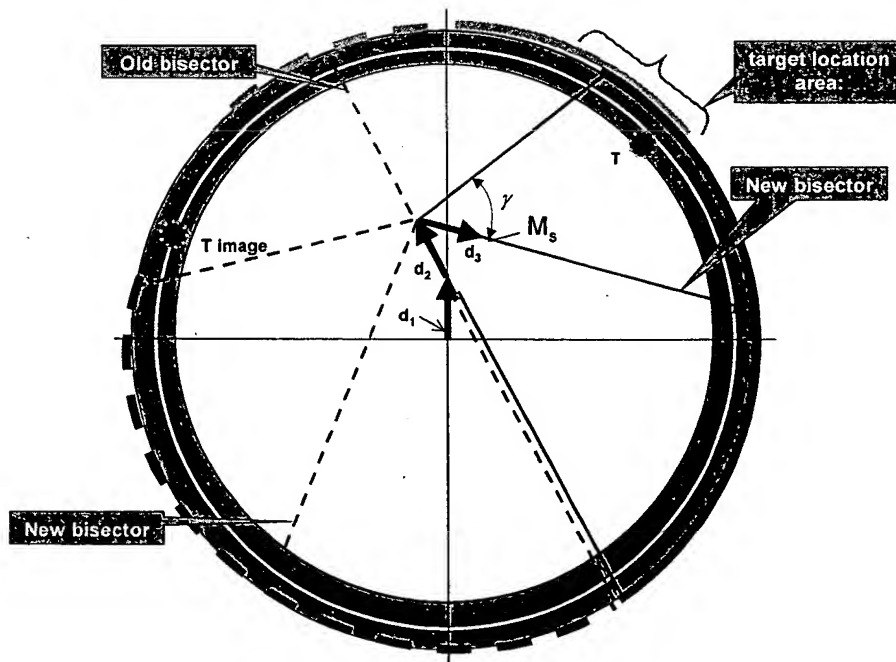


FIG. 26

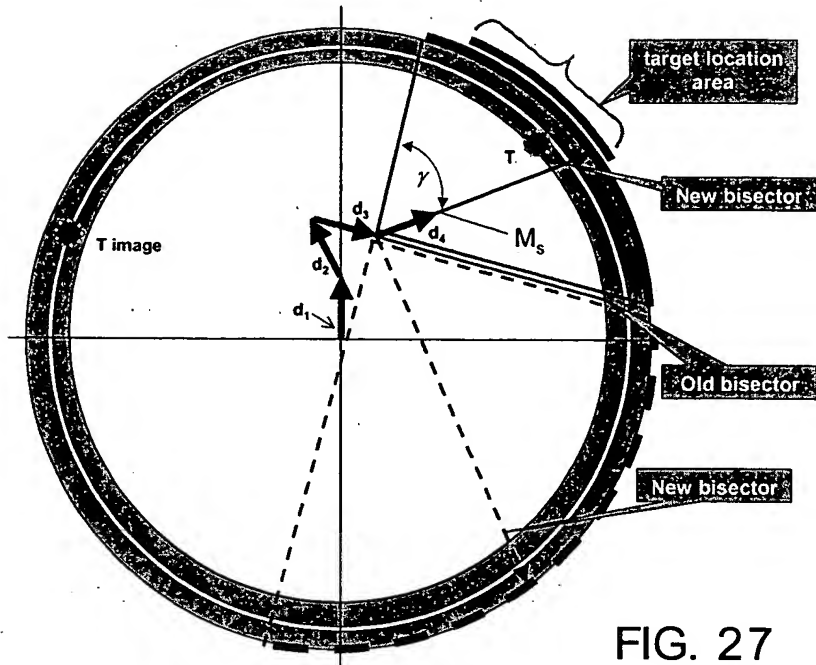


FIG. 27

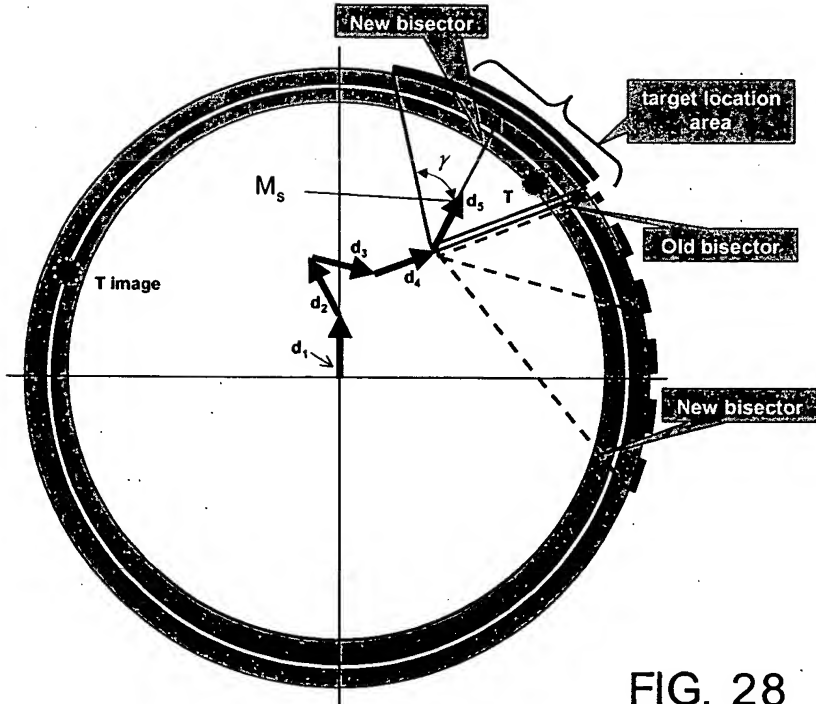


FIG. 28

25/30

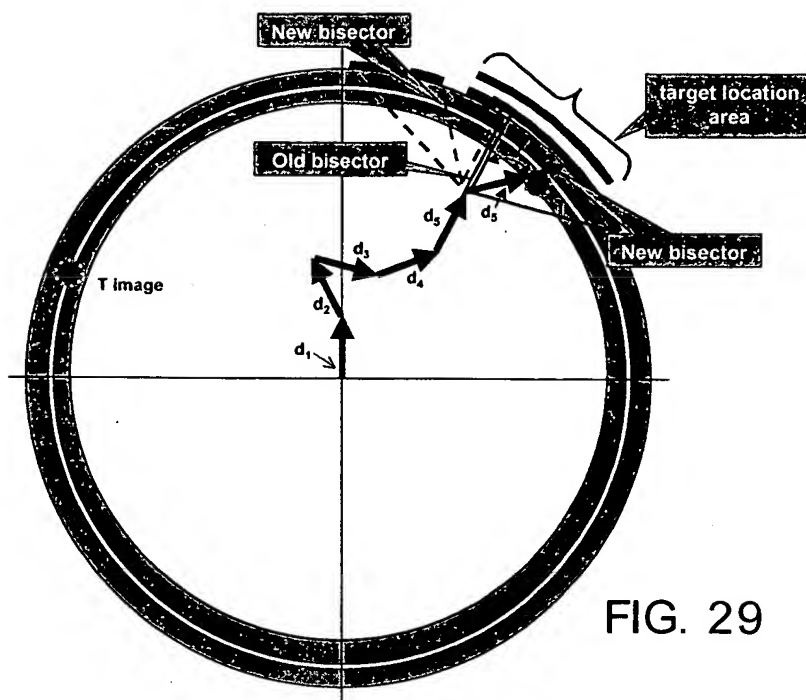


FIG. 29

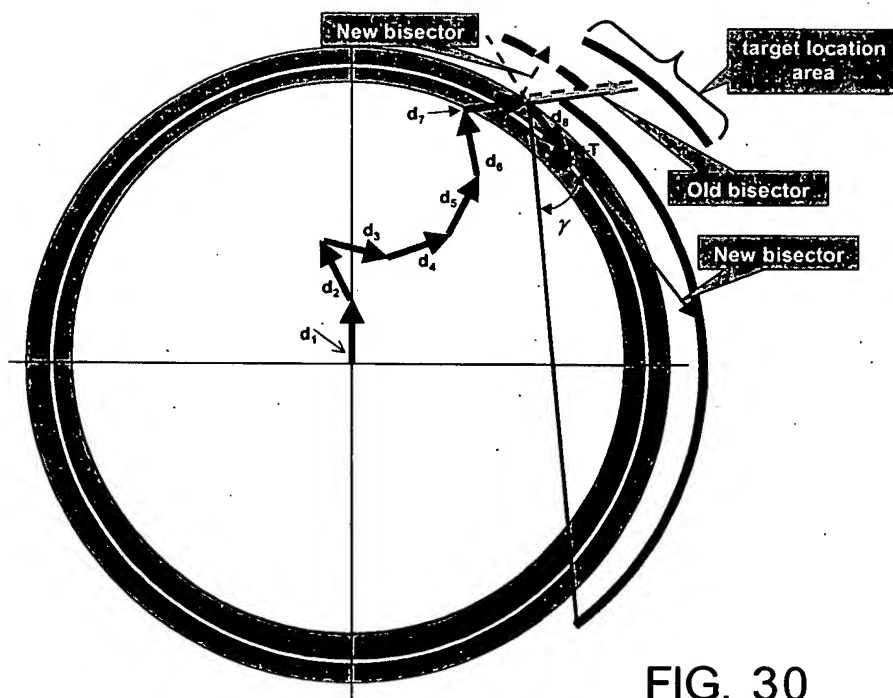


FIG. 30

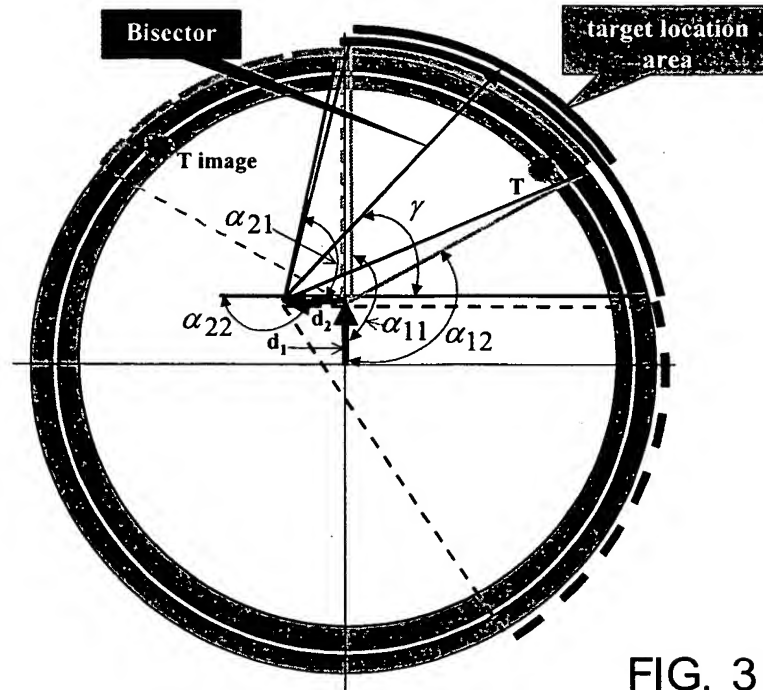


FIG. 31

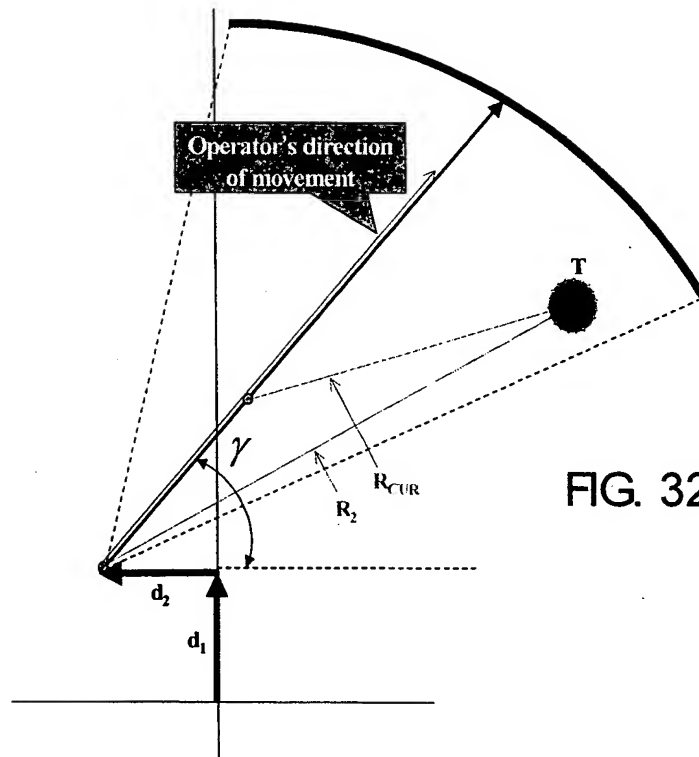


FIG. 32

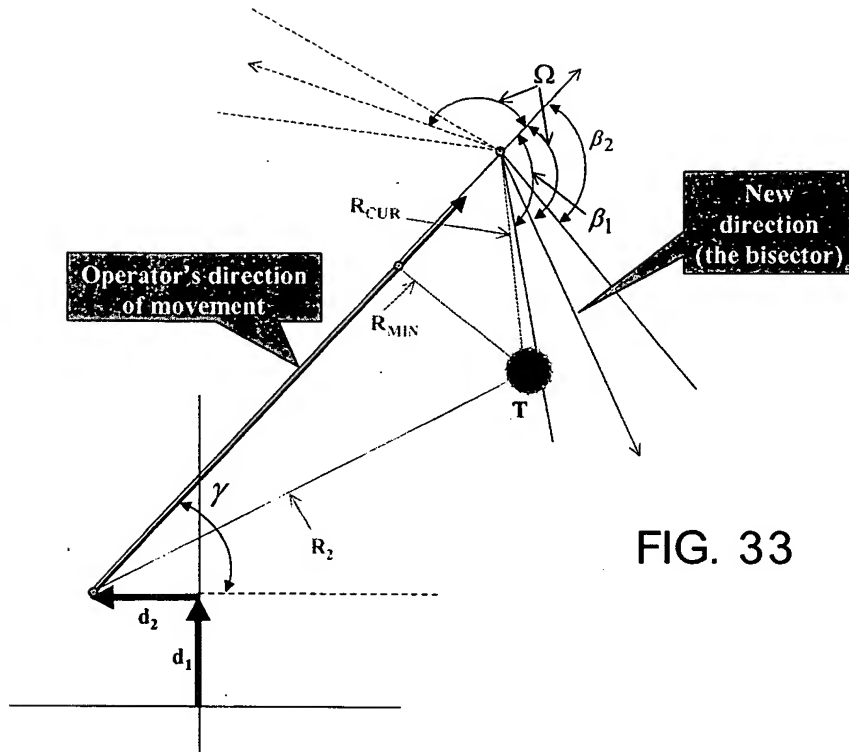


FIG. 33

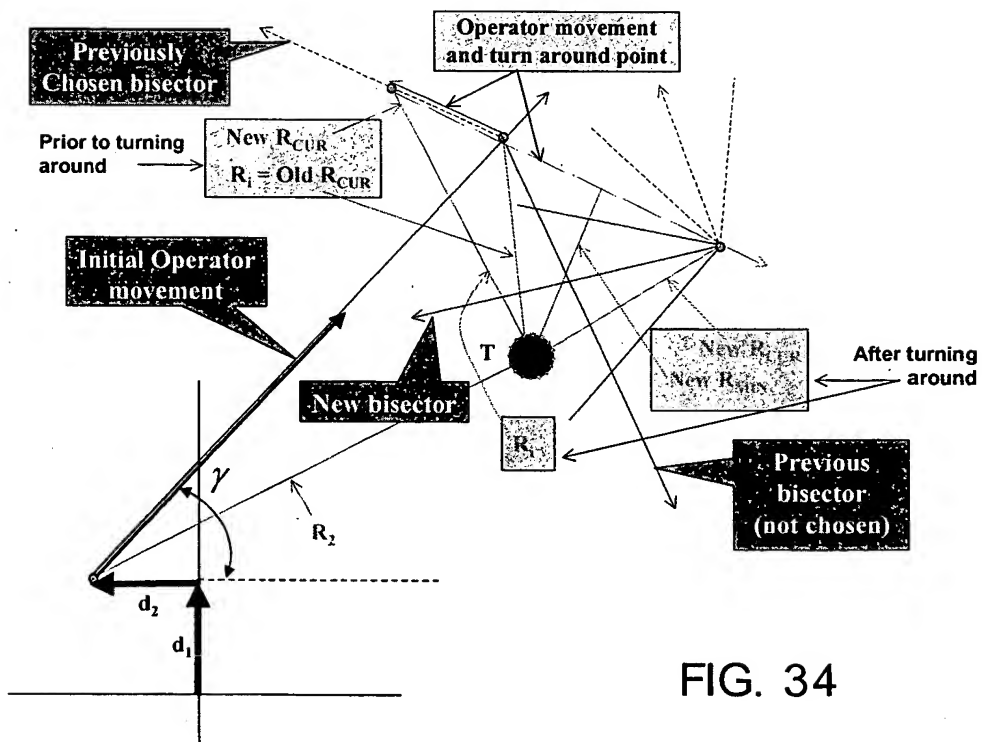


FIG. 34

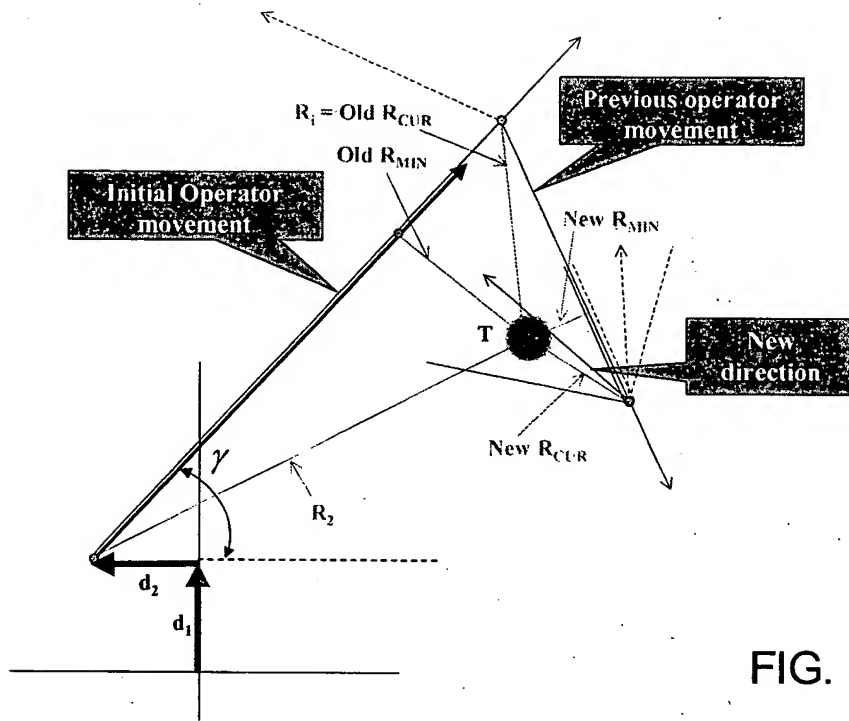


FIG. 35

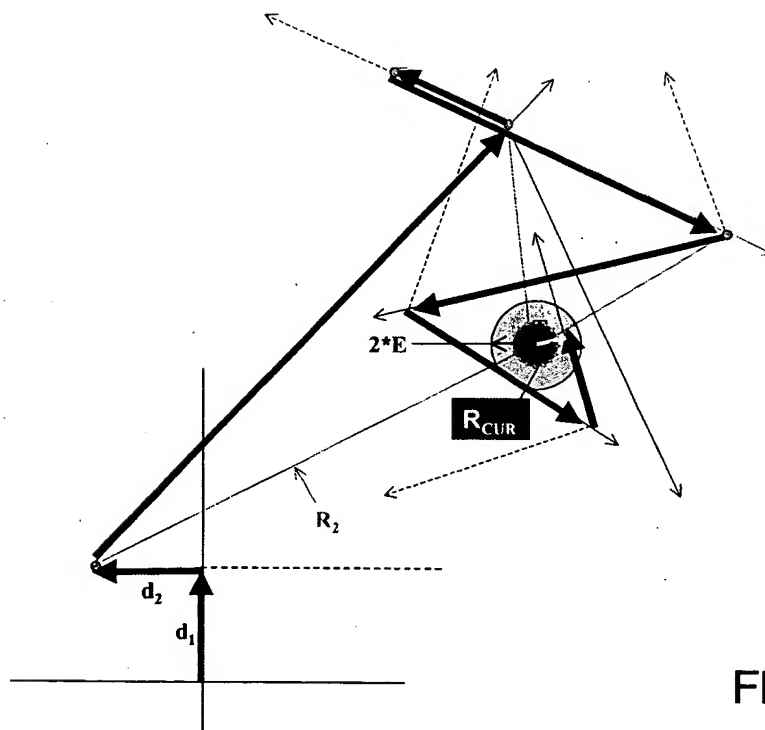


FIG. 36

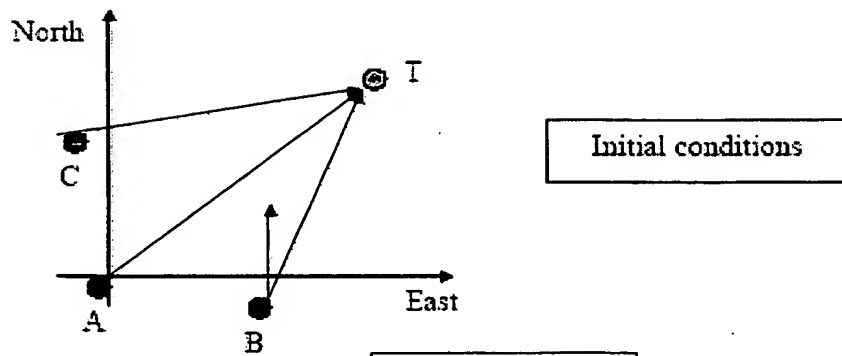


FIG. 38A

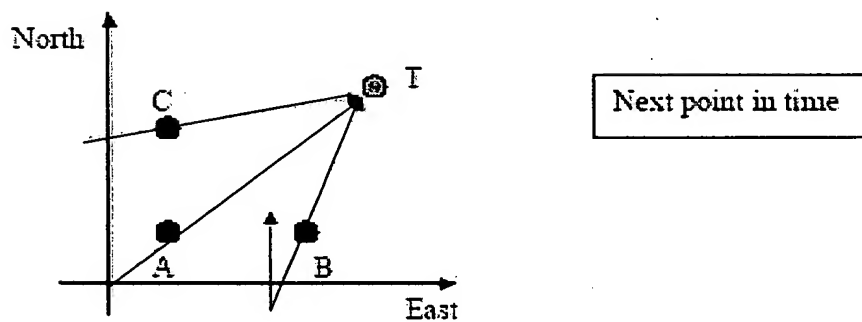


FIG. 38B

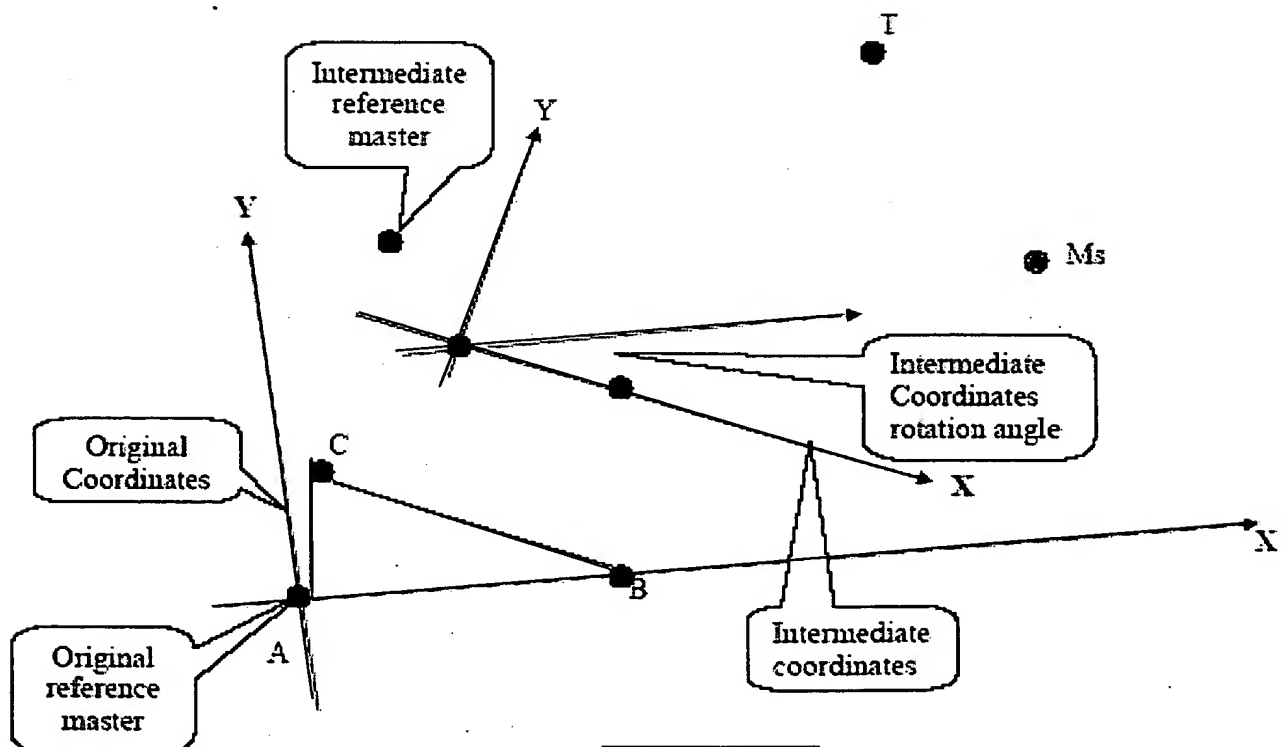


FIG. 39

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